

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

CANON, INC., §
§
Plaintiff, §
§
v. § **CIVIL ACTION NO. 2:18-CV-546-JRG**
§
§
TCL ELECTRONICS HOLDINGS LTD., §
TCL CORPORATION, §
SHENZHEN TCL NEW §
TECHNOLOGIES CO. CO. LTD., §
TCL KING ELECTRICAL §
APPLIANCES §
(HUIZHOU) CO., LTD., §
§
Defendants. §

MEMORANDUM OPINION AND ORDER

Before the Court is Plaintiff Canon Inc.'s Claim Construction Opening Brief. (Dkt. No. 91.) Also before the Court are Defendants' Responsive Claim Construction Brief (Dkt. No. 92), and Plaintiff Canon Inc.'s Claim Construction Reply Brief. (Dkt. No. 96.)

The Court held a claim construction hearing on March 18, 2020. (See Dkt. No. 109.) The Parties subsequently submitted supplemental claim construction briefing. (Dkt. Nos. 118, 122, 126, 130.) Having considered the arguments and evidence presented by the parties at the hearing and in their claim construction briefing, the Court issues this Claim Construction Order.

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I. BACKGROUND

Plaintiff Canon (“Plaintiff” or “Canon”) brings suit alleging infringement by Defendants TCL Electronics Holdings Ltd., TCL Corporation, Shenzhen TCL New Technologies Co. Ltd., and TCL King Electrical Appliances (Huizhou) Co., Ltd. (collectively, “Defendants”) of the following five patents: U.S. Patent Nos. 7,810,130 (“the ‘130 patent”); 8,078,767 (“the ‘767 patent”); 8,346,986 (“the ‘986 patent”); 8,713,206 (“the ‘206 patent”); and 7,746,413 (“the ‘413 patent”). An introduction to each of these patents is discussed in the analysis section below.

II. LEGAL PRINCIPLES

It is understood that “[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Independ. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).

“In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva Pharmas. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must

contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent's claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s invention. Otherwise, there would be no need for claims. *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court’s claim construction analysis is substantially guided by the Federal Circuit’s decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that “the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term “is the meaning that the term would have to a person of ordinary skill in

the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314–17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

Phillips, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the

United States Patent and Trademark Office (“PTO”) understood the patent. *Id.* at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; see *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation”).

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Phillips*, 415 F.3d at 1319–24. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.” *Id.* at 1321. *Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.*

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323–25. Rather, *Phillips* held that a court must attach the appropriate

weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 134 S. Ct. 2120. “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112, ¶ 6; *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (en banc in relevant portion). Section 112, Paragraph 6, provides that a structure may be claimed as a “means . . . for performing a specified function” and that an act may be claimed as a “step for performing a specified function.” *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002).

However, § 112, ¶ 6 does not apply to all functional claim language. There is a rebuttable presumption that § 112, ¶ 6 applies when the claim language includes “means” or “step for” terms and that it does not apply in the absence of those terms. *Williamson*, 792 F.3d at 1348. The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function. *Id.* at 1349; *see also Media*

Rights Techs., Inc. v. Capital One Fin. Corp., 800 F.3d 1366, 1371-72 (Fed. Cir. 2015); *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014).

When it applies, § 112, ¶ 6 limits the scope of the functional term “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347. Construing a means-plus-function limitation involves multiple steps. “The first step . . . is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). “[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Id.* A “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Id.* The focus of the “corresponding structure” inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” *Id.* The corresponding structure “must include all structure that actually performs the recited function.” *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). However, § 112 does not permit “incorporation of structure from the written description beyond that necessary to perform the claimed function.” *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

III. CONSTRUCTION OF AGREED TERMS

In their December 30, 2019 P.R. 4-3 Joint Claim Construction and Prehearing Statement (Dkt. No. 87), and their March 4, 2020 Joint Claim Construction Chart Pursuant to P.R. 4-5(d) (Dkt. No. 100), the parties submitted the following agreements:

TERM	AGREED CONSTRUCTION
“latest” (the ‘130 patent)	“most recent”
“predetermined [first/second] period” (the ‘767, ‘986, and’ 206 patents)	Plain and ordinary meaning, which is “a period of time determined beforehand”
“displaying an operation screen related to the determined operation form displayed” / “which displays an operation screen related to the operation form which is determined by the determining unit displayed” (the ‘413 patent)	“displaying an operation screen related to the determined operation form” / “which displays an operation screen related to the operation form which is determined by the determining unit”
“outside” (the ‘413 patent)	“a location not in the remote control device or the device displaying the operation screen”

Accordingly, the Court adopts the constructions agreed to by the parties as listed above.

IV. CONSTRUCTION OF DISPUTED TERMS

The parties’ positions and the Court’s analysis as to the disputed terms are presented below, and are grouped based on the relevant patent(s).

A. The ‘130 Patent

The ‘130 patent, titled “Method and Apparatus of Power Management for Moving Image-Streaming Content,” was filed on September 29, 2003, and claims priority to an earlier patent application filed on October 8, 2002. The ‘130 patent issued on October 5, 2010.

The ‘130 patent relates generally to viewing conventional television broadcasts and internet streaming broadcasts on a television or similar display. (*See, e.g.*, ‘130 patent col. 1, l. 8- col. 2, l. 55.) In particular, the object of the stated invention is to receive internet streaming broadcast at a higher speed to make the user feel as comfortable as watching a conventional television broadcast.

(*See id.*) The Abstract of the ‘130 patent states:

Provided is a receiving apparatus for receiving streaming contents which is capable of receiving contents at a higher speed. The receiving apparatus receives and accumulates the streaming contents periodically during a power off state or while other contents are being audiovisually enjoyed.

Claim 1 of the ‘130 patent recites:

A receiving apparatus for receiving a moving image-streaming content through an internet, the moving image-streaming content being internet broadcasting content, said apparatus comprising:

a receiving unit for receiving a moving image-streaming content which is internet broadcasting content by an access through the internet to a URL of the streaming content;

a memory unit for storing URL information of the moving image-streaming content received by the receiving unit;

a display unit for displaying on a display screen the moving image-streaming content received by the receiving unit; an operation unit for receiving an operation of turning off and turning on a power source for supplying power;

a buffering unit for buffering the moving image-streaming content received by the receiving unit; and

a control unit for (1) controlling, responsive to the receiving by the operation unit of the operation of turning off the power source, to read out the URL information stored in the memory unit, and (2) controlling, while the power source is in an off state, to periodically repeat accessing of a URL of the moving image-streaming content which had been displayed before the turning off the power source, so as to receive by the receiving unit and to buffer in the buffering unit the latest moving image-streaming content, and (3) controlling, responsive to the receiving by the operation unit of the operation of turning on the power source, to read out from the buffering unit the latest buffered moving image-streaming content and to start the displaying on the display screen of the latest buffered moving image-streaming content.

1. “periodically repeat[ing] accessing of a URL of the moving image-streaming content”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
“repeat[ing] accessing for a period of time of a URL of the moving-image streaming content”	“repeat[ing] accessing of a URL of the moving-image streaming content at regular intervals”

The term “periodically repeat[ing] accessing of a URL of the moving image-streaming content” appears in claims 1, 2, 5, and 7 of the ‘130 patent.

(1) The Parties' Positions

Plaintiff contends that the phrase “periodically repeating accessing” refers to the repeated accessing of a URL “for a period of time” based on the intrinsic support. (*See, e.g.*, Dkt. No. 91, at 3.) In particular, during the period of time set for outputting signals, repeated accessing of a URL will take place until the period of time elapses. (*Id.*) Plaintiff argues that the specification (relying on FIG. 4) is clear that a timer starts a timer operation and a period of time is set for the timer to output timing signals, which is used to initiate the repeated accessing of a URL. (*Id.* at 3 – 5.) Plaintiff argues that Defendants’ inclusion of the word “regular intervals” has no support in the intrinsic record. (*Id.* at 5 – 6.)

Defendants contend that a construction of “at regular intervals” is based on the intrinsic support and a plain meaning of the term “periodically.” (*See, e.g.*, Dkt. No. 92 at 3-4.) Defendants argue that a plain meaning of the term—evidenced by dictionary definitions—requires “regular intervals.” (*Id.* at 3.) Defendants argue that the term “periodically” is used according to its plain meaning in the specification. (*Id.*) Defendants argue that the specification teaches repeated accessing is performed at regular intervals, i.e., each time a set time on the timer is reached. (*Id.* at 4.) Defendants contend that Plaintiff’s construction contradicts the specification and by requiring the system to access the streaming content while the timer is running, but ceasing access of the content once the timer has expired. (*Id.*) Defendants argue that under Plaintiff’s construction, once the “period of time” expires, no more repeated accessing and buffering occurs. (*Id.*)

In its Reply, Plaintiff contends that Defendants’ position would require “indeterminate buffering capacity,” whereas the specification teaches managing “periodic buffering using limited, allocated buffering capacity.” (*See, e.g.*, Dkt. No. 96 at 3.) Plaintiff argues that Defendants rely

on “cherry-picked” dictionary definitions in contrast to the intrinsic support to include the unnecessary “regular intervals” limitation. (*Id.* at 3.) Plaintiff argues that Defendants’ construction would cause repeated accessing at every minute until and unless the power on is detected. (*Id.* at 4.) Plaintiff argues that under its construction, the specific way in which “repeated accessing” occurs is immaterial so long as such accessing occurs during a period of time. (*Id.* at 5.)

(2) Analysis

The parties’ dispute is whether the phrase “periodically repeating accessing” is “for a period of time” or “at regular intervals.” The disputed term appears in claims 1, 2, 5, and 7 of the ‘130 patent. A portion of claim 1 is reproduced below, in relevant part:

a control unit for ... controlling, while the power source is in an off state, to **periodically repeat accessing of a URL of the moving image-streaming content** which had been displayed before the turning off the power source, so as to receive by the receiving unit and to buffer in the buffering unit the latest moving image-streaming content...

The claim language is clear that the control unit controls periodically repeat accessing a URL while the power source is in an off state. The claim language, by itself, does not necessarily require “regular” periods or intervals of access.

The parties rely mostly on the specification in support of their constructions. In particular, both parties point to FIG. 4 in the patent and the related specification disclosure as being supportive of their constructions. In relation to FIG. 4, the specification teaches that during a power off state, the controller instructs the timer to start the timer operation and sets a period for outputting a timing signal during the power off state. (*See, e.g.*, ‘130 patent, col. 9, ll. 43-49; col. 13, ll. 28-58; *see also* FIG. 4.) Likewise, the specification teaches that while the power source for the receiving

apparatus is in an off state, the timer outputs the timing signal at the set period and according to the timing signal periodically repeats receiving data:

Further, while the power source 125 for the receiving apparatus 100 is in an off state, the timer 117 outputs the timing signal at the set period (step S123). The controller of Internet connection 116 controls the Internet connector 105 according to the timing signal, and **periodically repeats** in a background the operation for receiving the data of the streaming contents that are audiovisually enjoyed immediately before the power off and storing the data into the data buffer 106. Accordingly, the latest data is constantly accumulated in the data buffer 106. The above operations are normally performed because the main power source 126 is in an on state.

(‘130 patent, col 10, ll. 6-17 (emphasis added).) It is clear that a period is set for outputting a timing signal, and that based on the timing signal the controller periodically repeats accessing a URL.

Overall, the Court is not persuaded by Defendants’ arguments. Defendants primarily rely on extrinsic dictionary definitions for the “regular” limitation in their proposed construction. The Court finds no support in the intrinsic record for the limitation of “regular” intervals. Even if there was support in the specification for Defendants’ construction, at best such support would be non-limited embodiments that should not be imported into the claim language.

On balance, the Court finds that the term “periodically repeat accessing” is appropriately construed as “repeat[ing] accessing at intervals of time.” The Court finds that, as a whole, the specification supports that the “periodically repeat accessing” limitation is a limitation that the repeat accessing occur at interval(s) of time. Further, the Court notes that during the claim construction hearing, Plaintiff conceded that the “periodically repeat accessing” may be done at intervals, but that they were not required to be regular. (Dkt. No. 116 at 110:18-24.)

The Court hereby construes the term “**periodically repeat[ing] accessing of a URL of the moving image-streaming content**” to mean “**repeat[ing] accessing at intervals of time of a URL of the moving image-streaming content**.”

2. “internet broadcasting content”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
“content obtainable over the Internet by more than one user”	“internet content simultaneously transmitted to a plurality of recipients”

The disputed term “internet broadcasting content” appears in claims 1, 2, 5, and 7 of the ‘130 patent.

(1) The Parties’ Positions

Plaintiff contends that its construction is consistent with the intrinsic evidence. (*See, e.g.*, Dkt. No. 91 at 1-2.) Plaintiff argues that Defendants’ construction relies on dictionary definitions in contrast to the intrinsic evidence and excludes preferred embodiments. (*Id.*) Plaintiff argues that the specification distinguishes conventional television broadcasts from internet content broadcasting. (*Id.* at 1.) Plaintiff argues that Defendants’ “simultaneous transmission” language is equated to a “push” type transmission found in conventional television broadcasts, and thus excludes preferred embodiments of “pulling” streaming broadcasts. (*Id.* at 1-2.) Plaintiff argues that Defendants’ construction attempts to construe “internet broadcast” in the conventional television context and not in the internet context as taught by the specification. (*Id.*)

Defendants contend that their construction gives meaning to all words of the term and is consistent with the intrinsic evidence. (*See, e.g.*, Dkt. No. 92 at 5.) Defendants argue that Plaintiff’s construction reads “broadcasting” out of the claim limitation. (*Id.*) Defendants argue that multiple dictionaries define “broadcast” to require “simultaneous transmission” to a plurality

of recipients. (*Id.*) Defendants argue that Plaintiff's construction improperly conflates "internet broadcasting content" to mean any content obtainable over the internet. (*Id.*) Defendants argue that how the content is accessed is different than the core meaning of the "broadcast" term, and whether the content is pushed to or pulled by the user does not change the inherent meaning of "broadcast." (*Id.* at 6.)

In its Reply, Plaintiff contends that Defendants' construction contradicts the intrinsic evidence. (*See, e.g.*, Dkt. No. 96 at 1.) Plaintiff argues that the specification distinguishes conventional television broadcasts from internet content broadcasting. (*Id.*) Plaintiff argues that there is no intrinsic evidence that limits the "internet broadcasting" term to "simultaneous transmission." (*Id.* at 2.) Plaintiff argues that the specification treats conventional broadcasting as a "push" type transmission and internet broadcasting as a "pull" type transmission. (*Id.*) Because internet broadcasting is a "pull" transmission, Plaintiff argues that the "simultaneous transmission" limitation is wrong. (*Id.*)

In its Supplemental Claim Construction Brief, Plaintiff argues that Defendants should be bound by the construction advocated by Roku, who is in privy with Defendants, in a related IPR. (*See, e.g.*, Dkt. No. 118 at Exh. 10; Dkt. No. 126 at 1.)

(2) Analysis

The parties dispute the inherent meaning of "internet broadcasting content" and whether a special meaning to this term is provided in the specification. In particular, the parties dispute whether "simultaneous transmission" is a required limitation.

Claims 1, 2, 5, and 7 of the '130 patent include the disputed term. Claim 1 is representative, and simply states that the claimed moving image-streaming content is "internet broadcasting content," and further specifies that it is received by an access through the internet to a URL of the

streaming content. Claim 2 is similar, and likewise recites moving image-streaming content as being “internet broadcasting content,” but further requires a separate type of “television broadcast program transmitted through a broadcast signal.” The claim language does not state simply “internet content,” “streaming content,” or “content obtainable over the internet,” but specifically requires the streaming content to be “internet broadcasting content.”

In the background section of the ‘130 patent, the specification discusses conventional broadcasts, such as television broadcasts, radio broadcasts, data broadcasts, etc., that are distributed by broadcast waves and satellites. (‘130 patent, col. 1, ll. 12-18.) The specification then discusses using the Internet to distribute moving images comparable in quality to a conventional television broadcast, which the patent refers to as “streaming contents” or “streaming broadcast.” (*Id.* at col. 1, ll. 25-32.) The ‘130 patent then contrasts a “streaming broadcast” from a conventional television broadcast:

The streaming broadcast includes the term “broadcast”, but is largely different in arrangement from the conventional television broadcast (of a push type) in the first place. In other words, while the distribution of the images and audio is similarly performed by means of the communication lines such as the Internet through, the streaming broadcast requires a user to access and obtain desired streaming contents (which is called a pull type). Unlike general television broadcast receiving, the streaming broadcast is not received immediately after calling up a desired channel.

(‘130 patent, col. 1, ll. 32-42.)

The Court finds Plaintiff’s construction impermissibly broad. Any internet content is capable of being obtained by more than one user. Plaintiff’s construction fails to provide any meaning to “broadcasting” in the disputed term and fails to provide an accurate construction of the “internet broadcasting content” term in light of the specification, the claim language, and the goals of the invention. The patentee specifically chose the phrase “internet broadcasting content” in the claim language – it did not choose “internet content,” “streaming content,” etc. “Broadcasting”

must have a meaning such that it is not rendered superfluous. *See, e.g., Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) (noting that “claims are interpreted with an eye toward giving effect to all terms in the claim.”). While the specification states that a “streaming broadcast” is largely different than a “conventional television broadcast,” there is no indication in the specification that the patentee intended to distinguish these two concepts based upon the term or the notion of broadcasting. Although Defendants rely on various dictionary definitions in support of their proposal, the Court is not convinced that such evidence requires a “simultaneous transmission” limitation based on the intrinsic record. A “broadcast” or “broadcasting” implies transmission that is intended for public or general reception. In the context of the internet, whether multiple users or recipients actually view the broadcasting content at the same time, that broadcasting content must be available to be viewed or obtained at the same time by the users. On balance, the Court finds that the phrase “simultaneously available” is more appropriate than “simultaneously transmitted” in the context of “internet broadcasting content” and the intrinsic record. Further, there does not appear to be any material dispute between the parties’ competing phrases of “more than one user” and “a plurality of recipients.”

The Court hereby construes the term **“internet broadcasting content”** to mean **“internet content that is simultaneously available to more than one user over the internet.”**

3. “a television broadcast program transmitted through a broadcast signal”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
Plain and ordinary meaning	“a television program simultaneously transmitted to a plurality of recipients”

The term “a television broadcast program transmitted through a broadcast signal” appears in claims 2 and 7 of the ‘130 patent.

(1) The Parties' Positions

Plaintiff contends that the disputed term has its plain and ordinary meaning and that a jury will be able to understand the term without construction. (*See, e.g.*, Dkt. No. 91 at 13.) Plaintiff argues that Defendants' construction will confuse the jury and it is unclear what is meant by "simultaneous transmission." (*Id.*) Plaintiff further argues that the claim does not require "two-way interaction" between the sender and the receiver, and thus to the extent any two-way interaction is required by the Defendants' use of "recipients," that construction is incorrect. (*Id.*)

Defendants contend that there is no dispute that a television broadcast is transmitted to a plurality of recipients, which is confirmed by the specification and extrinsic dictionary definitions. (*See, e.g.*, Dkt. No. 92 at 5.) Defendants argue that their construction does not require "two-way interaction" between a sender and a receiver; instead, it requires only transmission to the recipients, not any action by the recipients. (*Id.*)

In its Reply, Plaintiff argues that it is unclear what is meant by "simultaneous transmission." (*See, e.g.*, Dkt. No. 96 at 8.) Plaintiff argues that it is unclear whether Defendants' construction limits the term to anything other than the full scope of a conventional television broadcast. (*Id.* at 8-9.) Plaintiff argues that Defendants' construction adds ambiguity to an otherwise readily understood term. (*Id.* at 9.)

(2) Analysis

The parties dispute whether a plain and ordinary meaning applies to this term and whether a construction is necessary and/or helpful. The "television broadcast program ..." term appears in claims 2 and 7 of the '130 patent. Claim 2 requires an "internet broadcasting content" that is accessed through a URL on the internet, and a "television broadcast program transmitted through a broadcast signal." Claim 7 is similar. Thus, the claim language contrasts "internet broadcasting

content” accessed over the internet to “television broadcast programs” transmitted through a broadcast signal. The claim language does not suggest that the phrase “television broadcast program transmitted through a broadcast signal” has anything other than its plain and ordinary meaning.

The specification confirms that the term has no special meaning. In the background section of the ‘130 patent, the specification discusses conventional broadcasts, such as television broadcasts, radio broadcasts, data broadcast, etc., that are distributed by broadcast waves and satellites. (‘130 patent at col. 1, ll. 12-18.) The specification contrasts a “streaming broadcast” from a conventional television broadcast. (*Id.* at col. 1, ll. 32-42.) In the detailed description of the ‘130 patent, the specification teaches that the disclosed receiving apparatus is capable of receiving a “television broadcast by broadcast waves” and a “streaming broadcast distributed through the Internet.” (*Id.* at col. 5, ll. 54-56.) Overall, the ‘130 patent provides no special meaning to the term “broadcast” or “broadcast signal” in the context of a conventional television broadcast. The Court finds that there is no express limitation, definition, or disavowal in the specification regarding a “television broadcast” or a “broadcast signal.” *See, e.g., GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (the specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal).

Overall, the Court rejects Defendants’ contention that this term needs construction. On its face, the claim language is clear. Both parties appear to agree that no special meaning was provided by the specification to a “television broadcast” or “broadcast signal.” Defendants’ construction attempts to provide a plain and ordinary meaning definition to the term based on dictionary definitions. The Court is not convinced that a construction is helpful, as the disputed

term is readily understood by a jury. Further, Defendants' proposed construction adds increased ambiguity to the claim.

On balance, the Court finds that a plain and ordinary meaning construction for this disputed term is consistent with the intrinsic record. The Court finds that one of ordinary skill in the art, based upon the specification and the claims, would understand the disputed term to have its plain and ordinary meaning. The use of the "television broadcast" and "broadcast" terms in the context of conventional television broadcasts in the specification is consistent with the plain meaning of the terms. The Court will not substitute one set of commonly understood terms with another set of commonly understood terms when a plain and ordinary meaning construction is sufficient. Because this resolves the dispute between the parties, the Court finds that no other terms within the disputed phrase require further construction. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."); *see also O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) ("[D]istrict courts are not (and should not be) required to construe every limitation present in a patent's asserted claims.") (*citing U.S. Surgical*, 103 F.3d at 1568).

The Court hereby construes the term "**a television broadcast program transmitted through a broadcast signal**" to have its **plain and ordinary meaning**.

4. “buffering” terms

<u>Disputed Term</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
“to buffer” / “which had been buffered” / “to . . . buffer” ('130 patent, claims 1-8)	Plain and ordinary meaning	“to temporarily store information for flow control” / “which had been temporarily stored for flow control” / “to temporarily store information for flow control”

The “buffering” terms appear in claims 1-8 of the ‘130 patent.

(1) The Parties’ Positions

Plaintiff contends that the “buffer” terms have their plain and ordinary meaning, which is to store with the expectation that the storage be reused at a later time. (*See, e.g.*, Dkt. No. 91 at 7.) Plaintiff argues that the patent does not change the plain and ordinary meaning of buffering and no clarification is necessary to a well understood term. (*Id.*) Plaintiff argues that Defendants’ definitions of the term using “temporarily storing” and “flow control” are not based on intrinsic support. (*Id.* at 7-8.)

Defendants contend that its construction is consistent with the specification’s treatment of the term. (*See, e.g.*, Dkt. No. 92 at 1.) Defendants provide various definitions or statements of what is meant by its “flow control” terminology. (*Id.* at 1-2.) Defendants argue that Plaintiff’s construction combines the separate ideas of “buffering” and “storing,” whereas Defendants’ construction keeps those different concepts separate. (*Id.* at 2.)

In its Reply, Plaintiff argues that buffering does not require “temporarily storing” information,” and that “flow control” is unclear. (*See, e.g.*, Dkt. No. 96 at 6.) Plaintiff further argues that there is no confusion between its proposed construction for “buffering” as opposed to the concept of “storing.” (*Id.*)

In its Supplemental Claim Construction Brief, Plaintiff argues that Defendants should be bound by the construction advocated by Roku, who is in privy with Defendants, in a related IPR. (See, e.g., Dkt. No. 118 at Exh. 10.)

(2) Analysis

The parties dispute whether a plain and ordinary meaning applies to this term and whether a construction is necessary and/or helpful. The “buffering” terms appear in various claims of the ‘130 patent. For example, claim 1 includes the phrase “to buffer . . . the latest moving image-streaming content.” Similarly, method claim 5 requires “buffering the moving image-streaming content.” The claim language on its face does not suggest that the “buffering” terms have anything other than their plain and ordinary meaning.

The specification confirms that the “buffering” terms have no special meaning. In the background section of the ‘130 patent, the specification discusses how it is necessary to perform a “buffering process” when receiving streaming data before starting reproduction. (‘130 patent, col. 1, l. 64 – col. 2, l. 3.) In particular, the specification states that the buffering is “performed as a requirement for decoding receive data on a terminal side, but mostly for mainly compensating uncertainty of speed on the Internet as a channel to perform smooth reproduction on the terminal side.” (*Id.*) The stated purpose of compensating for Internet speed uncertainty and “smooth data reproduction” is consistent with the plain and ordinary meaning of the term. Other references to “buffer” in the specification likewise provide no special meaning to the “buffering” terms. (See, e.g., ‘130 patent, col. 2, ll. 45-53.) The references to data buffer 106 are also consistent with the plain and ordinary meaning of the term. (See *id.* at col. 7, ll. 37-41.) The Court finds that there is no express limitation, definition, or disavowal in the specification regarding the “buffering” terms.

See, e.g., GE Lighting Solutions, 750 F.3d at 1309 (the specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal).

Overall, the Court rejects Defendants' contention that these "buffering" terms need construction. On its face, the claim language is clear. Both parties appear to agree that no special meaning was provided by the specification to the "buffering" terms. Defendants' construction attempts to provide a plain and ordinary meaning definition to the term based on dictionary definitions. While the Court does not disagree with Defendants' citations to the dictionary definitions, the Court does not find those definitions necessarily helpful or warranted as to a construction to this term. Further, Defendants' proposed construction adds increased ambiguity to the claim by the use of the phrase "flow control." However, the Court agrees with the Defendants that a plain and ordinary meaning of the "buffer" term requires "temporary storage." On the other hand, the Court rejects Plaintiff's position that storing and buffering have the same meaning. Storing and buffering are used in the claims and the specification separately, and the plain and ordinary meaning of the terms are different.

On balance, the Court is not convinced that a construction is helpful, as the disputed term is readily understood by a jury. The Court finds that a plain and ordinary meaning construction for this disputed term is consistent with the intrinsic record. One of ordinary skill in the art, based upon the specification and the claims, would understand the disputed term to have its plain and ordinary meaning. The use of the "buffer" terms in the claims and in the specification is consistent with the plain meaning of the terms. The Court will not substitute one set of commonly understood terms with another set of commonly understood terms when a plain and ordinary meaning construction is sufficient. Because this resolves the dispute between the parties, the Court finds that no other terms within the disputed phrase requires further construction. *See U.S. Surgical*

Corp., 103 F.3d at 1568 (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro*, 521 F.3d at 1362 (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”) (*citing U.S. Surgical*, 103 F.3d at 1568).

The Court construes each of the “**to buffer**,” “**which had been buffered**,” and “**to . . . buffer**” terms to have their respective **plain and ordinary meanings**.

5. “a control unit for controlling . . .”

<u>Disputed Term</u>	<u>The Parties’ Proposed Construction</u>
[1] “a control unit for . . .” ('130 patent, claim 1)’	<p>The parties dispute whether the term has a plain and ordinary meaning (Plaintiff) or whether it is a means-plus-function (MPF) limitation (Defendants). To the extent it is a MPF limitation, the parties agree on the recited function but disagree as to the corresponding structure.</p> <p><u>Function: [agreed function]</u></p> <p>1. controlling, responsive to the receiving by the operation unit of the operation of turning off the power source, to read out the URL information stored in the memory unit</p> <p>2. controlling, while the power source is in an off state, to periodically repeat accessing of a URL of the moving image-streaming content which had been displayed before the turning off the power source, so as to receive by the receiving unit and to buffer in the buffering unit the latest moving image streaming content</p> <p>3. controlling, responsive to the receiving by the operation unit of the operation of turning on the power source: [a] to read out from the buffering unit the latest buffered moving image streaming content and [b] to start the displaying on the display screen of the latest buffered moving image-streaming content</p> <p><u>Plaintiff’s Structure:</u> Controller or CPU, such as controller 121 and CPU identified in 15:7 – 16 and 15:66 – 17:67, programmed or with software programmed, to perform the algorithm(s), as described in the claim language; steps S118 – S123, S125 – S126; steps S235 – S241, S222 – S230; 8:33 – 44; 10:53 – 11:3; and structural equivalents thereof</p> <p><u>Defendant’s Structure:</u></p>

	controller 121 configured to perform steps S118- S123 (while the power source is in an off state) and S125-S126 (while the power source is in an on state) and structural equivalents thereof
[2] “a control unit for ...” (‘130 patent, claim 2)”	<p>The parties dispute whether the term has a plain and ordinary meaning (Plaintiff) or whether it is a means-plus-function (MPF) limitation (Defendants). To the extent it is a MPF limitation, the parties agree on the recited function but disagree as to the corresponding structure.</p> <p><u>Agreed Function:</u></p> <ol style="list-style-type: none"> controlling, responsive to the receiving by the operation unit of the operation of switching from the displaying of the moving image-streaming content on the display screen to the displaying of the television broadcast program on the display screen: (a) to stop the displaying of the moving image-streaming content on the display screen and to start the displaying of the television broadcast program on the display screen, and (b) to read out the URL information stored in the memory unit controlling, while the television broadcast program is displayed on the display screen, to periodically repeat accessing of a URL of the moving image-streaming content which had been displayed before starting the displaying of the television broadcast program on the display screen, so as to receive by the receiving unit and to buffer in the buffering unit the latest moving image-streaming content controlling, responsive to the receiving by the operation unit of the operation of switching from the displaying of the television broadcast program on the display screen to the displaying of the moving image-streaming content on the display screen: [a] to read out from the buffering unit the latest buffered moving image-streaming content and [b] to start the displaying on the display screen of the latest buffered moving image-streaming content <p><u>Plaintiff’s Structure:</u></p> <p>Controller or CPU, such as controller 121 and CPU identified in 15:7 – 16 and 15:66 – 17:67, programmed or with software programmed, to perform the algorithm(s), as described in the claim language; S318 – S325; 14:56 – 65; and structural equivalents thereof</p> <p><u>Defendants’ Structure:</u></p> <p>controller 121 configured to perform steps S318- S325 and structural equivalents thereof</p>

A first disputed “control unit ...” term appears in claim 1 of the ‘130 patent, and a second disputed “control unit ...” term appears in claim 2 of the ‘130 patent.

(1) The Parties' Positions

Plaintiff contends that the “control unit” terms are not means-plus-function (MPF) limitations. (*See, e.g.*, Dkt. No. 91 at 10-12.) Plaintiff argues that there is a presumption that the terms are not a MPF limitation because they do not use the word “means.” (*Id.*) Plaintiff argues that during prosecution of the application leading to the ‘130 patent, originally presented claims used the word “means,” but new claims using the term “unit” were presented, which confirms that there was no intent to claim a MPF limitation. (*Id.* at 11.) Plaintiff argues that the “control unit” term connects a definite hardware structure to one of skill in the art, and is recognized as a processor. (*Id.*) Plaintiff argues that dictionary definitions provide a clear meaning to the term. (*Id.* at 12.) Plaintiff further argues that the claim language provides sufficient structure to the term by providing detailed algorithms. (*Id.*) To the extent the term is found to be a means-plus-function limitation, Plaintiff generically asserts that its proposed structure is more complete than Defendants’ proposed structure. (*Id.*)

Defendants contend that the terms are MPF limitations. (*See, e.g.*, Dkt. No. 92 at 7-10.) Defendants argue that “unit” is the same as “means,” and one of skill in the art would not recognize “control unit” to recite sufficiently definite structure. (*Id.* at 7.) Defendants argue that the claim language does not inform or impart structure to the control unit term itself. (*Id.* at 8.) Defendants argue that the claim language recites function – not structure – and the dictionary definition relied upon by Plaintiff likewise recites function, not structure. (*Id.*) Defendants argue that even though “means” claims were cancelled during prosecution, there were no statements of clear intent by the patentee stating that the claims were not means-plus-function limitations. (*Id.* at 9.) To the extent the term is found to be a means-plus-function limitation, Defendants argue that the structure is the only components that are “clearly linked” to the recited function, and that Plaintiff’s structure

includes elements from different portions of the specification that are not “clearly linked.” (*Id.* at 9-10.)

In its Reply, Plaintiff contends that Defendants have failed to overcome the presumption that each term is not a MPF limitation, and generally distinguishes the cases relied upon and arguments presented by Defendants. (*See, e.g.*, Dkt. No. 96 at 6-8.)

In its Supplemental Claim Construction Brief, Plaintiff argues that Defendants should be bound by the construction advocated by Roku, who is in privy with Defendants, in a related IPR. (*See, e.g.*, Dkt. No. 118 at Exh. 10.)

(2) Analysis

The parties dispute whether the “control unit” term is a means-plus-function term according to § 112 ¶ 6 or whether it has its plain and ordinary meaning. To the extent the term is a means-plus-function limitation, the parties agree on the recited function but dispute the corresponding structure. For the ‘130 patent, the “control unit” terms are found in claims 1 and 2. The parties provide the same analysis for both terms.

The relevant claim language from claims 1 and 2 of the ‘130 patent is reproduced below:

[claim 1] **a control unit** for (1) controlling, responsive to the receiving by the operation unit of the operation of turning off the power source, to read out the URL information stored in the memory unit, and (2) controlling, while the power source is in an off state, to periodically repeat accessing of a URL of the moving image-streaming content which had been displayed before the turning off the power source, so as to receive by the receiving unit and to buffer in the buffering unit the latest moving image-streaming content, and (3) controlling, responsive to the receiving by the operation unit of the operation of turning on the power source, to read out from the buffering unit the latest buffered moving image-streaming content and to start the displaying on the display screen of the latest buffered moving image-streaming content.

[claim 2] **a control unit** for (1) controlling, responsive to the receiving by the operation unit of the operation of switching from the displaying of the moving image-streaming content on the display screen to the displaying of the television broadcast program on the display screen, (a) to stop the displaying of the moving

image-streaming content on the display screen and to start the displaying of the television broadcast program on the display screen, (b) to read out the URL information stored in the memory unit, (2) controlling, while the television broadcast program is displayed on the display screen, to periodically repeat accessing of a URL of the moving image-streaming content which had been displayed before starting the displaying of the television broadcast program on the display screen, so as to receive by the receiving unit and to buffer in the buffering unit the latest moving image-streaming content, and (3) controlling, responsive to the receiving by the operation unit of the operation of switching from the displaying of the television broadcast program on the display screen to the displaying of the moving image-streaming content on the display screen, to read out from the buffering unit the latest buffered moving image-streaming content and to start the displaying on the display screen of the latest buffered moving image-streaming content.

(emphasis added).

It is well settled that a claim limitation that actually uses the word “means” invokes a rebuttable presumption that § 112, ¶ 6 applies. *See, e.g., Williamson*, 792 F.3d at 1349. It is also equally understood that a claim term that does not use “means” will trigger the rebuttable presumption that § 112, ¶ 6 does not apply. *Id.* The presumption against the application of § 112, ¶ 6 may be overcome if a party can “demonstrate[] that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* (*quoting Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

Because the claims do not recite the word “means,” there is a rebuttable presumption that § 112 ¶ 6 does not apply. While “unit” is a nonce term that can be “tantamount to using the word means,” *Williamson*, 792 F.3d at 1350, the full term in question is “control unit.” The underlying question is whether the “control unit” term describes sufficiently definite structure to one of ordinary skill in the art. Overall, the Court finds that the “control unit” term does have sufficiently definite structure. The “control” modifier imparts structural significance to the term, and, as such, “control unit” is structural. *See id.; see also Cellular Communs. Equip. LLC v. HTC Corp.*, No. 6:16-CV-475-KNM, 2018 U.S. Dist. LEXIS 3759 (E.D. Tex. Jan. 8, 2018) (holding that “control

unit” is not a means-plus-function limitation because the control unit connotes sufficiently definite structure to one of skill in the art). Defendants have not overcome the presumption that § 112 ¶ 6 does not apply. Thus, the Court finds that the “control unit” terms are not means-plus-function limitations and are not subject to § 112, ¶ 6.

The Court finds that the “control unit” term connotes a sufficiently definite structure. Plaintiff’s expert opines that one of skill in the art would understand the term to be a “processor, such as a CPU, that controls the performance of apparatus functions.” (Dkt. No. 91-9 at ¶ 55.) Plaintiff and its expert submitted and relied upon an extrinsic technical dictionary definition of control unit, which is defined as “a device or circuit that performs an arbitrating or regulating function.” (Dkt. No. 91-11 at 128.) Thus, Plaintiff’s expert recognizes that the term is not unbounded, but reflects known structures. The Court finds that the extrinsic dictionary definition strongly supports a finding that a “control unit” connotes definite structure to one of skill in the art. *See Massachusetts Instit. of Tech. v. Abacus Software*, 462 F.3d 1344, 1355 (Fed. Cir. 2006) (relying on technical dictionaries to determine whether the term “circuitry” connotes structure).

Defendants do not appear to challenge the extrinsic dictionary definition or Plaintiff’s expert’s definition of the term. Rather, Defendants argue that such definitions use purely functional language rather than specific structure. Indeed, Defendants’ expert does not dispute Plaintiff’s dictionary definition, but argues that the definition and related structure includes functional language. (Dkt. No. 92-8 at ¶ 268.) The Court disagrees. That a term is described according to its function does not necessarily mean that the term fails to designate structure. *Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F. 3d 1014, 1019 (Fed. Cir. 2017) (“To determine whether a claim recites sufficient structure, ‘it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of

structures and even if the term identifies the structures by their function.””), *citing TecSec, Inc. v. Int'l Bus. Machs. Corp.*, 731 F.3d 1336, 1347 (Fed. Cir. 2013).

The Court’s finding is further supported by the claim language relating to the “control unit” term. As illustrated above, the claims provide detailed steps for the “control unit” term in relation to the other structural components of the claim. When a structure-connoting term such as “control unit” is coupled with a description of the unit’s operation within the claim, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and § 112, ¶ 6 presumptively will not apply. *See, e.g., MIT*, 462 F.3d at 1355-56. Thus, the Court finds that the specific description of the operation of the control unit with the claim further avoids a finding of a means-plus-function limitation.

The Court’s finding is further supported by the prosecution history for the ‘130 patent. During prosecution, the Applicant originally presented claims that includes the word “means.” Those claims were cancelled during prosecution and new claims were presented that did not include the word “means.” For example, instead of using “controlling means,” the Applicant used the term “storage control unit,” which the Applicant later split into separate terms of a “storage unit” and a “control unit.” Defendants do not dispute the prosecution history presented by Plaintiffs, but argue that such actions do not rise to a level of clear statements to claim structural terms or disclaim a means-plus-function application. On balance, the Court finds that the prosecution history indicates the Applicant made clear, affirmative choices to avoid using means-plus-function language and that the “control unit” term was not intended to be a means-plus-function limitation.

The Court finds that the “control unit” term connotes sufficiently definite structure to one of skill in the art because “control unit” refers to a known type of hardware and because the relevant

claim limitations provide specific steps on how the “control unit” is to operate within the context of the claimed invention and other components. Ultimately, Defendants have failed to overcome the presumption against means-plus-function treatment for this non-means term. Accordingly, the Court rejects Defendants’ proposal of means-plus-function treatment.

The Court further finds that one of ordinary skill in the art, based upon the specification and the claims, would understand the term “control unit” to have its plain and ordinary meaning. For example, the specification repeatedly refers to controller 121, which both parties agree is disclosed structure for the term. The Court finds that controller 121 is used in the specification in a manner consistent with the extrinsic dictionary definition of the “control unit” term and Plaintiff’s expert’s definition of a “control unit.”

The Court hereby construes each of the **“control unit ...”** terms in claims 1 and 2 of the ‘130 patent to have their **plain and ordinary meaning**.

B. The ‘767, ‘986, and ‘206 Patents

The ‘767 patent, the ‘986 patent, and the ‘206 patent share the same specification. The ‘767 patent was filed on August 21, 2009, and claims priority to a patent application that was filed on May 29, 2008. The ‘767 patent issued on December 13, 2011. The ‘986 patent is a continuation of the application leading to the ‘767 patent, was filed on October 26, 2011, and was issued on January 1, 2013. The ‘206 patent is a continuation of the application leading to the ‘986 patent, was filed on December 7, 2012, and was issued on April 29, 2014. Each of the patents has the same title of “Display, Apparatus, Control Method Thereof, and Program.” For the purposes of this opinion, all references to a specification for these patents will be to the specification of the ‘767 patent.

In general, the '767 patent, the '986 patent, and the '206 patent relate to controlling a display based on data transmitted from an externally connected device. In particular, when a communication connection with an externally connected device is disconnected during execution of a display with the device, the display can be continued or ended based on the class of the connected device. (See, e.g., '767 patent at Abstract; col. 5, ll. 15-33; col. 6, ll. 53-57; col. 13, l. 57 – col. 14, l. 40.) The Abstract of the '767 patent is reproduced below:

When a communication connection with a device is disconnected during execution of a display based on data transmitted from the connected device, it can be controlled to continue or end the display according to a class of the device. A display apparatus 1 includes a USB connector 102 used to connect an external device so as to be able to communicate with that device. The display apparatus 1 also includes a CPU 107 which controls to make a display based on data received from the external device with which a communication connection is established via the USB connector 102. The CPU 107 acquires class information indicating a class of the external device, the communication connection of which is established. When the communication connection with the external device is disconnected, if the acquired class information indicates a predetermined class, the CPU 107 controls to continue the display based on the received data, and if the class information does not indicate the predetermined class, the CPU 107 controls to end the display.

Claim 1 of the '767 patent is reproduced below:

A display apparatus characterized by comprising:
a display unit;
a connection unit configured to connect an external device to be able to communicate with the external device; and
a control unit configured to control said display unit to make a display based on data received from the external device with which a communication connection is established via said connection unit,
characterized in that said control unit acquires class information indicating a class of the external device from the external device via said connection unit, controls said display unit to continue the display based on the data received from the external device at the time of disconnection of the communication connection with the external device if the class of the external device indicated by the class information is a predetermined class, and controls said display unit to end the display based on

the data received from the external device at the time of disconnection of the communication connection with the external device if the class of the external device indicated by the class information is not the predetermined class.

6. “USB mass storage class” and “USB imaging class”

<u>Disputed Term</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
“USB mass storage class”	Plain and ordinary meaning	“class of a device that conforms to the Universal Serial Bus Mass Storage Class specifications”
“USB imaging class”	Plain and ordinary meaning	“class of a device that conforms to the Universal Serial Bus Still Image Capture Device Definition”

The disputed term “USB mass storage class” appears in claim 3 of the ‘767 patent and claim 4 of the ‘986 patent, while the disputed term “USB imaging class” appears in claims 4 and 5 of the ‘767 patent and claim 5 of the ‘986 patent.

(1) The Parties’ Positions

Plaintiff contends that the terms have their plain and ordinary meaning. (*See, e.g.*, Dkt. No. 91 at 22-23.) Plaintiff argues that it is not necessarily the case that a device must conform exactly to a particular specification – if the device itself identifies itself as a particular class, that is sufficient, regardless of whether it actually conforms to a specific specification or definition. (*Id.*) In its Reply, Plaintiff contends that strict conformance is not required and is not supported by the intrinsic evidence. (*See, e.g.*, Dkt. No. 96 at 9.)

Defendants contend that the USB mass storage class and USB imaging class terms refer to particular classes of devices with particular definitions. (*See, e.g.*, Dkt. No. 92 at 10-11.) Defendants argue that if the device is not the particularly claimed device, then it cannot be the identified device, even if it identifies itself as the claimed device. (*See id.*)

(2) Analysis

The parties dispute whether a plain and ordinary meaning applies to this term and whether

a construction is necessary and/or helpful. The parties do not appear to dispute the basic definitions of the terms, but dispute the effect of those definitions in context of the surrounding claim language.

The term “USB mass storage class” appears in claim 3 of the ‘767 patent and claim 4 of the ‘986 patent, while the disputed term “USB imaging class” appears in claims 4 and 5 of the ‘767 patent and claim 5 of the ‘986 patent. Claims 3 and 4 of the ‘767 patent are representative of the parties’ dispute and are reproduced below:

[claim 3] The display apparatus according to claim 1, characterized in that if the class information indicates a **USB mass storage class**, said control unit controls to end the display.

[claim 4] The display apparatus according to claim 1, characterized in that if the class information is class information indicating a **USB imaging class**, said control unit controls to continue the display.

(emphasis added). Claim 1, upon which claims 3 and 4 depend, specifies that the “control unit acquires class information indicating a class of the external device from the external device via said connection unit” (emphasis added). Likewise, claims 3 and 4 specify that if the indicated class is a USB mass storage class or a USB imaging class, the display is either ended or continued, respectively. The claims do not require strict “conformance” to a particular set of specifications to satisfy the claimed limitations. Instead, the claims only require class information that indicates a class of the external device.

The specification recognizes that the indicated class of the connected external device may be a mass storage class or an imaging class. (*See, e.g.*, FIG. 4A.) For example, a flash memory device may be a mass storage class, and a digital still camera may be an imaging class. In the background section, the specification mentions that in one example the projector recognizes the flash memory as Mass Storage Class based on the USB standard. (‘767 patent at col. 1, ll. 61-67.)

In one embodiment, the specification teaches that the CPU sends an inquiry to the USB host controller to determine a class of the communication-connected USB device based on information transmitted by the connected USB device:

The CPU 107 sends an inquiry to the USB host controller 110 to determine a class of the communication-connected USB device (S804). This class is determined based on class information transmitted from the USB device when the USB host controller 110 establishes a USB communication with that USB device connected via the USB connector 102. More specifically, the class information of the USB device includes **USB Mass Storage Class** indicating the class of a device which is a simple storage and physically disconnects a communication connection. Also, the class information includes **USB Imaging Class** (often also called Imaging Device) indicating the class of a device which can execute communication control with the connected display apparatus 1 and can logically disconnect a communication connection depending on devices. Note that **USB Mass Storage Class** will be referred to as **Mass Storage Class**, and **USB Imaging Class** will be referred to as **Imaging Class** hereinafter. For example, the flash memory 3 transmits class information indicating Mass Storage Class to the display apparatus 1 at the time of connection, and the digital camera 4 transmits class information indicating Imaging Class to the display apparatus 1 at the time of connection. If the class information indicates Mass Storage Class in step S804, the process to be executed by the CPU 107 advances to step S805; if the class information indicates Imaging Class, the process advances to step S817; otherwise, the process advances to step S831.

(‘767 patent at col. 10, l. 60 – col. 11, l. 19 (emphasis added).) For example, flash memory 3 may indicate itself as a mass storage class, while digital camera 4 may indicate itself as an imaging class. (*See id.*) Like the claims, the specification illustrates an example wherein the class information is indicated based on class information transmitted from the external device. (*See id.*) The specification confirms that the “USB mass storage class” and the “USB imaging class” have no special meaning other than their plain and ordinary meaning. The Court finds that there is no express limitation, definition, or disavowal in the specification regarding these terms. *See, e.g., GE Lighting Solutions*, 750 F.3d at 1309.

Overall, the Court rejects Defendants’ contention that these terms need construction. On its face, the claim language is clear. Both parties appear to agree that no special meaning was

provided by the specification to the terms. Further, the parties do not appear to dispute the basic definitions of the terms; rather, the parties' dispute is largely centered around the effect of those definitions in context of the claim language. Further, the Court does not find that Defendants' proposed constructions are necessarily helpful or supported, particularly to the extent that they require strict conformance to a particular specification. Much like a label, all that is required by the claims is that the acquired class information indicates or identifies that the external device is a USB mass storage class (claim 3) or a USB imaging class (claim 4), regardless of whether it actually conforms to a specific class or specification.

The Court is not convinced that a construction is helpful, as the disputed terms are readily understood by a jury. The Court finds that a plain and ordinary meaning construction is consistent with the intrinsic record. The Court finds that one of ordinary skill in the art, based upon the specification and the claims, would understand each of the disputed term to have its plain and ordinary meaning. The use of the "USB mass storage class" and "USB imaging class" terms in the claims and in the specification is consistent with the plain meaning of the terms

The Court hereby construes the term "**USB mass storage class**" to have its **plain and ordinary meaning**.

The Court hereby construes the term "**USB imaging class**" to have its **plain and ordinary meaning**.

7. "logically disconnect" terms

<u>Disputed Term</u>	<u>Plaintiff's Proposed Construction</u>	<u>Defendants' Proposed Construction</u>
"logically disconnects a communication connection" / "logically disconnect the communication with the communication unit"	Plain and ordinary meaning, which is "disables communication regardless of physical connection"	"ceases communication with a connected device although a physical connection remains intact" /

/ “communication [with the external device] is logically disconnected” / “communication with the external device is . . . a logical disconnection”	/ “disable communication regardless of physical connection” / “communication is disabled regardless of physical connection” / “communication is disabled regardless of physical connection”	“cease communication with the communication unit although a physical connection remains intact” / “communication with the external device is ceased although a physical connection remains intact”
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The “logically disconnect” terms appear in claim 2 of the ‘767 patent, claims 2, 3, 6, 8, and 11 of the ‘986 patent, and claims 4, 7, 8, and 10 of the ‘206 patent.

(1) The Parties’ Positions

Plaintiff contends that these terms have a plain and ordinary meaning, which is disabling communication regardless of a physical connection. (*See, e.g.*, Dkt. No. 91 at 22.) Plaintiff argues that one could cease communicating without logically disconnecting, and therefore a construction requiring “disabling” is more appropriate than merely “ceasing.” (*Id.*)

Defendants contend that their construction aligns with the intrinsic record and the understanding of one skill in the art. (*See, e.g.*, Dkt. No. 92 at 11-12.) Defendants argue that a physical disconnection is mutually exclusive to a logical disconnection. (*Id.* at 12.) Defendants argue that if the disconnection is logical, then a physical connection remains; thus, a logical disconnection refers to a disconnection event where a physical connection remains intact. (*Id.*) Defendants argue that Plaintiff’s construction allows a physical disconnection to be both a physical and logical disconnection. (*Id.*)

In its Reply, Plaintiff contends that nothing in the intrinsic evidence limits a logical disconnection to one where a physical connection remains intact. (*See, e.g.*, Dkt. No. 96 at 9.)

(2) Analysis

The parties dispute the meaning of a “logical disconnection,” and more particularly dispute the relevance of a “physical disconnection” in relation to a “logical disconnection.” While there are slightly different usages of the “logical disconnection” terms in the claims, the parties treat the terms generally the same. The Court notes that in Defendants’ responsive brief on this term, the Defendants agreed that their “cease” word could be replaced by “disable” as proposed by Plaintiffs. Thus, the real dispute between the parties is whether a logical disconnection is “regardless” of a physical connection or requires an “intact” physical connection.

The phrase “logically disconnects a communication connection” appears in claim 2 of the ‘767 patent. The phrase “logically disconnect the communication with the communication unit” appears in claims 2 and 3 of the ‘986 patent. The phrase “when the communication with the external device is logically disconnected” appears in claim 8 of the ‘986 patent. The phrase “logically disconnected when the communication with the external device is disconnected” appears in claims 6 and 11 of the ‘986 patent. The phrase “if the communication with the external device is logically disconnected” appears in claims 4 and 10 of the ‘206 patent. The phrase “disconnection of the communication with the external device is a physical disconnection or a logical disconnection” appears in claims 7 and 8 of the ‘206 patent. In certain claims of the ‘986 patent, the claim requires both logical disconnection and physical disconnection. For example, claim 6 of the ‘986 patent is reproduced below in relevant part:

a determination unit configured to determine whether or not to continue the display ... by detecting whether the communication is **physically disconnected** or whether the communication is **logically disconnected** when the communication with the external device is disconnected;

(emphasis added). Likewise, claims 7 and 8 of the ‘206 patent include both logical disconnection and physical disconnection. The fact that a single claim mentions that the disconnection can be

either a physical disconnection or a logical disconnection does not necessarily require the presence of a physical connection for a logical disconnection to occur.

The specification has numerous references to the “logical disconnection” term:

In step S509, the user removes the USB cable 95 from the printer 96 or digital camera 94. Note that a device, which can control a communication session and **logically disconnects** a communication connection like the digital camera 94, often disconnects a communication like closing of a communication session in addition to a physical communication disconnection by, for example, removal of the USB cable 95. For example, when the battery remaining amount lowers during the aforementioned PictBridge sequence, the digital camera 94 side may execute control for disconnecting a USB communication so as to reduce consumption power.

* * *

For this reason, in addition to the image display end operation that the user intended by removing the flash memory or USB cable, the image display operation often ends without the intention of the user by the control on the device side that **logically disconnects** a communication connection.

* * *

When the class of the connected device corresponds to, for example, the digital camera, the USB communication **may be disconnected either by removal of the device by the user or by control on the USB device side**. Therefore, since the USB connection is disconnected by not only removal of the device by the user who intended to end the projection display operation, it is preferable for the display apparatus 1 to continue to display an image, whose projection display operation is in progress, when the USB connection is disconnected.

* * *

More specifically, the class information of the USB device includes USB Mass Storage Class indicating the class of a device which is a simple storage and **physically disconnects** a communication connection. Also, the class information includes USB Imaging Class (often also called Imaging Device) indicating the class of a device which can execute communication control with the connected display apparatus 1 and can **logically disconnect** a communication connection depending on devices.

(‘767 patent at col. 3, l. 64 – col. 4, l. 7; col. 5, ll. 20-25; col. 14, ll. 13-22; col. 10, l. 65 – col. 11, l. 7 (emphasis added).) Overall, the Court finds that the specification treats a “logical

disconnection” as a distinct and different connection than a “physical connection.” At no point does the specification define a “logical disconnection” based on the presence or absence of a “physical disconnection.” At no point does the specification state that a logical disconnection must occur with an intact physical connection; likewise, at no point does the specification state that a logical disconnection cannot occur without a physical connection. In other words, the specification teaches a logical disconnection regardless of a physical connection. Indeed, the specification expressly states that a “logical disconnection” is in addition to a “physical disconnection.” (‘767 patent at col. 3, l. 65 – col. 4, l. 2.)

The Court finds Plaintiff’s construction more appropriate based on the intrinsic evidence. The claim language is clear on its face and does not require the limitations proposed by Defendants. The specification does not define a “logical disconnection” based on an “intact” physical connection. As a whole, the intrinsic evidence is clear that a logical disconnection is distinct and different from a physical disconnection, and that a logical disconnection may occur regardless of a physical connection. In other words, consistent with Plaintiff’s position, a logical disconnection means that a communication is disabled, whether or not a physical connection is maintained. The Court finds that the phrase “disables communication regardless of physical connection” to be most appropriate for the “logically disconnect” term. The Court is not persuaded by Defendants’ arguments, and rejects them accordingly.

The Court hereby construes the term **“logically disconnects a communication connection”** to mean **“disables communication regardless of physical connection.”**

The Court hereby construes the term **“logically disconnect the communication with the communication unit”** to mean **“disable communication with the communication unit regardless of physical connection.”**

The Court hereby construes the term “**communication with the external device is ... a logical disconnection**” to mean “**communication with the external device is disabled regardless of physical connection**.”

8. “continue,” “end,” and “stop” the display

<u>Disputed Term</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
“continue the display”	Plain and ordinary meaning	“maintain the display of that which is displayed at the time of disconnection”
“end the display”	Plain and ordinary meaning	“clear or overwrite that which is displayed at the time of disconnection”
“stop” / “stops” / “stopping of the display”	[same as above]	[same as above]

The term “continue the display” appears in claims 1, 4, 11, 13, and 14 of the ‘767 patent and claims 1, 3, 5, 6, 10, and 11 of the ‘986 patent. The term “end the display” appears in claims 1, 3, 5-8, 10, 11, 13, and 14 of the ‘767 patent and claims 4, 7, and 8 of the ‘986 patent. The terms “stop,” “stops,” and “stopping of the display” appears in claims 1-4, 7-10, and 13-14 of the ‘206 patent.

(1) The Parties’ Positions

Plaintiff contends that the terms have their plain and ordinary meaning and that the jury will understand the terms without construction. (*See, e.g.*, Dkt. No. 91 at 20-21.) Plaintiff argues that it is unclear what the term “maintain” means in Defendants’ construction for the “continue” term, and thus that Defendants’ construction adds uncertain ambiguity to the meaning of the term. (*Id.* at 20.) Plaintiff argues that the words “clear” and “overwrite” do not appear in any of the claims, but only in examples in the specification, and are thus impermissible limitations to an embodiment in the specification. (*Id.* at 21.)

Defendants contend that the “ending” and “stopping” the display terms, in the context of the patent, include both “clearing (*e.g.*, turning off) the display and overwriting what is displayed with something else.” (*See, e.g.*, Dkt. No. 92 at 13.) Defendants argue that there are no other examples in the specification to provide meaning to these terms, and thus it is not an impermissible limitation. (*Id.*) Defendants argue that the “continue” the display term, in the context of the patent, means “to maintain the display of that which was displayed at the time of disconnection and does not mean keeping the display on but displaying other content.” (*Id.*) Defendants argue that “overwriting” is not “continuing” the display. (*Id.*)

In its Reply, Plaintiff contends that Defendants’ constructions are impermissible narrowing of the terms from their plain and ordinary meaning. (*See, e.g.*, Dkt. No. 96 at 9.)

(2) Analysis

The “continue the display” and “end the display” terms are found in the claims of the ‘767 patent and the ‘986 patent. The “stop” and “stopping of the display” terms are found in the claims of the ‘206 patent. The parties treat the “stop” and “end” terms the same with no separate analysis. Plaintiff argues a plain and ordinary meaning approach to these terms, and Defendants argue that their constructions are necessitated upon the disclosures in the specification. Claim 1 of the ‘767 patent is representative of the parties’ dispute as to these terms, and is reproduced below in relevant part:

characterized in that said control unit . . . controls said display unit to continue the display based on the data received from the external device at the time of disconnection of the communication connection with the external device if the class of the external device indicated by the class information is a predetermined class, and controls said display unit to end the display based on the data received from the external device at the time of disconnection of the communication connection with the external device if the class of the external device indicated by the class information is not the predetermined class.

(emphasis added). As in claim 1 of the ‘767 patent and other claims, if the class of the external device is indicated as the predetermined class (e.g., an imaging class or a mass storage class), then the control unit continues the display (e.g., if the device class is an imaging class) or ends the display (e.g., if the device class is not the imaging class) when the external device is disconnected. The claim language does not suggest that the “continue” or “end” terms have anything other than their plain and ordinary meaning.

The specification has various references to the terms. The Abstract of the ‘767 patent states that “[w]hen a communication connection with a device is disconnected during execution of a display based on data transmitted from the connected device, it can be controlled to continue or end the display according to a class of the device.” (‘767 patent at Abstract (emphasis added).) In discussing the problems the invention allegedly solves, the specification teaches that “a display apparatus, which can control to continue or end a display operation according to a device class when a communication connection with a device is disconnected during execution of the display operation based on data transmitted from the connected device, a control method thereof, and a program.” (*Id.* at col. 5, ll. 27-33 (emphasis added).) Likewise, in discussing the effects of the alleged invention, the specification teaches that “the display operation can be controlled to continue or end according to the device class.” (*Id.* at col. 6, ll. 53-57 (emphasis added).) In relation to FIG. 4A, the specification teaches that “the display apparatus 1 may store a class for which an image display operation is to be continued and a class for which the operation is to be ended (or one of these classes) at the time of disconnection of a communication.” (*Id.* at col. 11, ll. 20-26.) Overall, the Court finds that the specification confirms that the “continue” and “end” terms have no special meaning. The Court finds that there is no express limitation, definition, or disavowal in the specification regarding these terms. *See, e.g., GE Lighting Solutions*750 F.3d at

1309 (the specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal).

Defendants argue that “continue the display” is a mutually exclusive counterpart to “end the display.” Defendants provide no specification support for their claim construction on the “continue the display” term. For the “end the display” term, Defendants rely primarily on the background section of the ‘767 patent which discusses “clearing” and “overwriting” an image based on removal of a flash memory device. (*See, e.g.*, ‘767 patent at col. 2, ll. 33-45.) Defendants’ arguments and citations to the specification are not persuasive. First, Defendants’ relied-upon portion of the specification does not use the terms “continue” or “end,” and does not otherwise equate “clearing” and “overwriting” to “ending the display.” Defendants fail to point to anything in the specification that specifically disclaims or defines the “continue” or “end” terms in the manner proposed by Defendants. Second, even if the Defendants are correct that the “clearing” and “overwriting” examples are embodiments of the “ending the display” term, the Court finds that the examples in the specification are non-limiting embodiments of the invention that should not be imported into the claims. The Federal Circuit has consistently held that “particular embodiments appearing in the written description will not be used to limit claim language that has broader effect.” *Innova/Pure Water*, 381 F.3d at 1117. Even where a patent describes only a single embodiment, absent a “clear intention to limit the claim scope,” it is improper to limit the scope of otherwise broad claim language by resorting to a patent’s specification. *Id.*; *see also Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (citing numerous cases rejecting the contention that the claims of the patent must be construed as being limited to the single embodiment disclosed and stating that claims are to be given their broadest meaning unless there is a clear disclaimer or disavowal); *Comark Commc’ns*,

Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1988) (“Although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.”); *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1254 (Fed. Cir. 2011) (“even where a patent describes only a single embodiment, claims will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words of expressions of manifest exclusion or restriction.”); *Phillips*, 415 F.3d at 1323.

Overall, the Court rejects Defendants’ arguments. On its face, the claim language is clear, and does not require the limitations proposed by Defendants. The Court finds that there is no lexicography, disavowal or disclaimer to require the limitations suggested by Defendants, and rejects Defendants’ arguments to the contrary. The Court finds that one of ordinary skill in the art, based upon the specification and the claims, would understand each of the disputed terms to have its plain and ordinary meaning.

The Court hereby construes the term “**continue the display**” to have its **plain and ordinary meaning**.

The Court hereby construes the term “**end the display**” to have its **plain and ordinary meaning**.

The Court hereby construes the terms “**stop**,” “**stops**,” and “**stopping of the display**” to have their **plain and ordinary meaning**.

9. “a connection unit configured to connect ...” and “a communication unit configured to communicate ...”

<u>Disputed Term</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
“a connection unit configured	Plain and ordinary meaning, not a MPF limitation. If construed as a MPF:	MPF limitation

to connect an external device to be able to communicate with the external device”	<p><u>Function:</u> connecting an external device to be able to communicate with the external device</p> <p><u>Structure:</u> Communication interface, as described in ‘767 Patent at 18:6-12; USB connector 102 / USB interface, including as described in ‘767 Patent at 10:6-8, USB host controller 110; and structural equivalents thereof</p>	<p><u>Function:</u> connecting an external device to be able to communicate with the external device</p> <p><u>Structure:</u> USB connector (102) and structural equivalents thereof</p>
“a communication unit configured to communicate with an external device”	<p>Plain and ordinary meaning, not a MPF limitation. If construed as a MPF:</p> <p><u>Function:</u> communicate with an external device</p> <p><u>Structure:</u> Communication interface, as described in ‘767 Patent at 18:6-12; USB connector 102 / USB interface, including as described in ‘767 Patent at 10:6-8, USB host controller 110; and structural equivalents thereof</p>	<p>MPF limitation</p> <p><u>Function:</u> communicate with an external device</p> <p><u>Structure:</u> USB host controller (110) and structural equivalents thereof</p>

The term “a connection unit configured to connect an external device to be able to communicate with the external device” appears in claims 1, 11, 13, and 14 of the ‘767 patent. The term “a communication unit configured to communicate with an external device” appears in claims 1, 6, 10, and 11 of the ‘986 patent and claims 1, 7, 13, and 14 of the ‘206 patent.

(1) The Parties’ Positions

Plaintiff contends that the terms have their plain and ordinary meaning and are not MPF limitations. (*See, e.g.*, Dkt. No. 91 at 14-15.) Plaintiff argues that Defendants have not rebutted the presumption that the terms are not a MPF limitation. (*Id.*) Plaintiff argues that the “connection unit” and “communication unit” terms are well understood terms, and would be recognized as “communications interface[s] that allow[] two devices to communicate with one another.” (*Id.* at 14.) Plaintiff argues that the claim language recites the unit’s objectives and how it operates within

the context of the claimed invention. (*Id.* at 14-15.) To the extent the term is found to be a means-plus-function limitation, Plaintiff generically asserts that its proposed structure is more complete than Defendants' proposed structure. (*Id.*) In its Reply, Plaintiff states that the term has a plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 96 at 10.)

Defendants contend that "connection unit" and "communication unit" do not recite sufficiently definite structures. (*See, e.g.*, Dkt. No. 92 at 14-17.) Defendants argue that the terms are not commercial phrases or terms of art that refer to a structure or class of structures, but instead only recite function. (*Id.*) Defendants further argue that the claim language does not provide structure and only recites function. (*Id.*) Thus, Defendants argue that section 112, paragraph 6 applies. (*Id.*) Defendants argue that merely reciting a function that is consistent with the unit's objectives does not inform the structural character of the limitation and is not sufficient to avoid a means-plus-function limitation. (*Id.* at 15.) Defendants argue that its proposed structures are the only structures "clearly linked" to the claimed function, whereas Plaintiff's structure improperly adds additional structures that are not "clearly linked." (*Id.* at 16-17.)

(2) Analysis

The parties dispute whether each of the "communication unit" and "connection unit" terms is a means-plus-function term according to § 112 ¶ 6 or whether the terms have plain and ordinary meaning. To the extent the term is a means-plus-function limitation, the parties agree on the recited function but dispute the corresponding structure.

The "connection unit" term appears in various claim of the '767 patent, while the "communication unit" term appear in various claims of the '986 and '206 patents. For example, claim 1 of the '767 patent requires "a connection unit configured to connect an external device to

be able to communicate with the external device,” while claim 1 of the ‘986 patent requires “a communication unit configured to communicate with an external device.”

Because the claims do not recite the word “means,” there is a rebuttable presumption that § 112 ¶ 6 does not apply. *Williamson*, 792 F.3d at 1349. While “unit” is a nonce term that can be “tantamount to using the word means,” see *Williamson*, 792 F.3d at 1350, the full terms in question are “connection unit” and “communication unit.” The underlying question is whether the “connection unit” and “communication unit” terms describe sufficiently definite structure to one of ordinary skill in the art. Overall, the Court finds that these terms do not have sufficiently definite structure and the claim language as a whole recites function without reciting sufficient structure for performing that function. Thus, the Court finds that these terms are means-plus-function limitations subject to § 112, ¶ 6.

The Court finds that the “communication unit” and “connection unit” terms do not connote sufficiently definite structure to one of skill in the art. Plaintiff’s expert opines, without support, that a “communication unit is a device for communicating, such as an interface apparatus,” and a “connection unit” is an “interface that allows two devices to communicate with one another.” (Dkt. No. 91-9 at ¶¶ 112, 115.) Defendants’ expert disagrees that these terms have any common meaning or provide sufficiently definite structure. In contrast to the “control unit” term herein, Plaintiff fails to provide any extrinsic evidence (besides its expert declaration) that the terms connote structure. Plaintiff cites no dictionary definitions or treatises that provide any meaning or definition to the terms. There is no evidence that the “communication unit” and “connection unit” terms are used in common parlance, are terms of art, or are used by persons of skill in the pertinent art to designate structure. While a “connection unit” would be understood as something that connects one thing to another, that functional understanding does not connate any specific structure

or class of structures. Likewise, a “communications unit” would be understood as something that communicates, but that functional understanding does not connote any specific structure or class of structures. That the patent specification discloses an example of a communication unit or a connection unit in the specification (such as a USB connector or a USB host controller) does not by itself impart structural significance to the nonce “unit” terms. *MTD Prods. Inc. v. Iancu*, 933 F.3d 1336, 1344 (Fed. Cir. 2019) (“That the specification discloses a structure corresponding to an asserted means-plus-function claim term does not necessarily mean that the claim term is understood by persons of ordinary skill in the art to connote a specific structure or a class of structures.”)

The Court finds that the claim language simply recites function without any sufficient structure for performing the recited function. For example, the relevant claim language states that the “communication unit” is configured to “communicate with an external device,” and the “connection unit” is configured to “connect an external device to be able to communicate with the external device.” Although the fact that a term is described according to its function does not necessarily mean that the term fails to designate structure, the Court finds that the “communication unit” term and “connection unit” terms do not provide sufficient structure to one of skill in the art, and the surrounding claim language simply recites the intended function of the terms. The Court rejects Plaintiff’s contentions that the terms have sufficient structure and that the claims are not means-plus-function limitations. On balance, the Court finds that Defendants have met their burden in showing these terms are means-plus-function limitations subject to § 112, ¶ 6.

Once it is determined that a term is a means-plus-function limitation, construing a means-plus-function limitation involves multiple steps. “The first step . . . is a determination of the function of the means-plus-function limitation.” *Medtronic*, 248 F.3d at 1311. “[T]he next step is

to determine the corresponding structure disclosed in the specification and equivalents thereof.”

Id. Under 35 USC §112, ¶ 6, means-plus-function terms are limited “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347.

Here, the parties agree on the recited functions but dispute the corresponding structures. Regarding the structure, both parties agree that the corresponding structure includes a “USB connector 102” for the “connector unit” term and a “USB host controller 110” for the “communications unit” term. The parties dispute whether additional structures proposed by the Plaintiff are “clearly linked” to the recited function.

The specification clearly teaches that the USB controller serves as corresponding structure for the “communication unit” term and the USB connector serves as corresponding structure for the “connection unit” term:

The **USB host controller 110** is a circuit which makes a USB communication with an external device using a VBUS line 111, D+ line 112, D– line 113, and GND line 114, which are specified in the USB standard. In the USB host controller 110, data to be transmitted/received is input/output by the CPU 107. The D+ line 112 and D– line 113 are USB communication lines used to make a differential communication, and are respectively pulled down by resistors 115 and 116. The VBUS line 111, D+ line 112, D– line 113, and GND line 114 are connectable to an external device via the USB connector 102 as a connection unit. The **USB connector 102** serves as a USB interface which can connect a USB device as an external device. Therefore, the display apparatus 1 and USB device can communicate with each other via the USB connector 102.

* * *

The CPU 107 sends an inquiry to the **USB host controller 110** to determine whether or not a USB device is communication-connected via the **USB connector 102**, and a USB communication is established (S803). If it is determined in step S803 that a USB communication is established, the process to be executed by the CPU 107 advances to the next step.

The CPU 107 sends an inquiry to the **USB host controller 110** to determine a class of the communication-connected USB device (S804). This class is determined based on class information transmitted from the USB device when the **USB host controller 110** establishes a USB communication with that USB device connected via the **USB connector 102**.

(‘767 patent at col. 9, l. 63 – col. 10, l. 10; col. 10, ll. 54-65 (emphasis added).) The specification makes clear that USB connector 102 is responsible for connecting an external device to be able to communicate with the external device. Likewise, the specification makes clear that USB host controller 110 performs the function of communicating with the external device. The specification does not disclose USB host controller 110 as a structure that “connects an external device to be able to communicate with the external device” (as required by the recited function for the “connection unit” term). Instead, the specification disclose USB host controller 110 as “a circuit which makes a USB communication with an external device” as specified in the USB standard. (See, e.g., ‘767 patent at col. 9, ll. 63-66.) This distinction is significant to the parties’ dispute. The Court finds that, based on the clear teachings in the specification, the USB host controller “communicates” with the external device while the USB connector is the structure that physically “connects” an external device “to be able to communicate with the external device.”

On balance, the Court does not find that the additional structures proposed by Plaintiff are “clearly linked” to the recited function. First, Plaintiff proposes the same corresponding structure for different recited functions and different means-plus-function limitations. While some means-plus-function limitations may be able to refer to the same corresponding structure, as discussed above the intrinsic record clearly identifies separate structures for the differently recited functions. By combining the structures that correspond to “connection unit” with those that correspond to “communication unit,” Plaintiff’s proposed corresponding structure contains additional structures that are not clearly linked to the claimed function. Second, Plaintiff’s construction refers to a

generic “communication interface,” but it is not clear what is meant by that term, as the cited specification (‘767 patent at col. 18, ll. 6-12) does not use that language. The specification never equates or “clearly links” a generic “communications interface” to both a “connection unit” and a “communications unit.” In effect, Plaintiff is attempting to create a generic “interface” unit from the specification based upon multiple and distinct structures as a corresponding structure that can perform multiple and different recited functions. The Court rejects this approach. Further, while the specification in one embodiment mentions an SDIO interface instead of a USB (‘767 patent at col. 18, ll. 6-12), it is not clear how or whether such a structure is clearly linked to either of the functions for the “connection unit” or “communication unit” terms.

Accordingly, the Court rejects the corresponding structures proposed by Plaintiff. The Court is not convinced that the additional language and structures proposed by Plaintiff are “clearly linked” and/or necessary to the recited functions. A “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Medtronic*, 248 F.3d at 1311. The focus of the “corresponding structure” inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” *Id.* The Court finds that the structures proposed by Defendants are those structures which are “clearly linked” to the recited function.

The Court hereby construes the term **“a connection unit configured to connect an external device to be able to communicate with the external device”** to be a means-plus-function limitation to mean:

Function: connecting an external device to be able to communicate with the external device

Structure: USB connector 102, or structural equivalents thereof

The Court hereby construes the term “**a communication unit configured to communicate with an external device**” to be a means-plus-function limitation to mean:

Function: communicate with an external device

Structure: USB host controller 110, or structural equivalents thereof

10. “a detection unit configured to detect ...”

<u>Plaintiff's Proposed Construction</u>	<u>Defendants' Proposed Construction</u>
<p>Plain and ordinary meaning, not a MPF limitation. If construed as a MPF:</p> <p><u>Function:</u> detect whether or not the external device is physically connected to said connection unit</p> <p><u>Structure:</u> Connection detector as described in '767 Patent at 18:13-22; insertion detector 121; and structural equivalents thereof</p>	<p>MPF limitation</p> <p><u>Function:</u> detect whether or not the external device is physically connected to said connection unit</p> <p><u>Structure:</u> insertion detector 121 or structural equivalents thereof</p>

The term “a detection unit configured to detect whether or not the external device is physically connected to said connection unit” appears in claim 6 of the '767 patent.

(1) The Parties' Positions

Plaintiff contends that the term has its plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 91 at 24.) Plaintiff argues that Defendants have not rebutted the presumption that the term is not a MPF limitation. (*Id.*) Plaintiff argues that the “detection unit” term is a well understood term and would be recognized as a detector that senses (detects) a condition. (*Id.*) Plaintiff argues that the claim language recites the unit's objectives and how it operates within the context of the claimed invention. (*Id.*) To the extent the term is found to be a means-plus-function limitation, Plaintiff generically asserts that its proposed structure is more

complete than Defendants' proposed structure. (*Id.*) In its Reply, Plaintiff states that the term has a plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 96 at 10.)

Defendants contend that the "detection unit" term does not connote sufficiently definite structure to one of skill in the art. (*See, e.g.*, Dkt. No. 92 at 17.) Defendants argue that the term is not a term of art used to refer to structure, and the claim language is directed solely to the functional capabilities of the detection unit without recitation of structure. (*Id.* at 17-18.) Defendants argue the mere fact that the specification discloses a detector does not necessarily make the "unit" term a well understood term or provide a sufficiently definite structure. (*Id.* at 18.) Defendants argue that their proposed construction is the only corresponding structure that is clearly linked to the recited function, and that the separately disclosed VBUS line structure is not a sufficiently definite structure to include as a corresponding structure. (*Id.*)

(2) Analysis

The parties dispute whether the "detection unit" term is a means-plus-function term according to § 112 ¶ 6 or whether it has its plain and ordinary meaning. To the extent the term is a means-plus-function limitation, the parties agree on the recited function but dispute the corresponding structure.

The "detection unit" term appears in claim 6 of the '767 patent with the following phrase: "a detection unit configured to detect whether or not the external device is physically connected to said connection unit."

Because the claims do not recite the word "means," there is a rebuttable presumption that § 112 ¶ 6 does not apply. *Williamson*, 792 F.3d at 1349. While "unit" is a nonce term that can be "tantamount to using the word means," see *id.* at 1350, the full term in question is "detection unit." The underlying question is whether the "detection unit" term describes sufficiently definite

structure to one of ordinary skill in the art. Overall, the Court finds that this term does not have sufficiently definite structure and the claim language as a whole recites function without reciting sufficient structure for performing that function. Thus, the Court finds that this term is a means-plus-function limitation subject to § 112, ¶ 6.

The Court finds that the “detection unit” term does not connote sufficiently definite structure to one of skill in the art. Plaintiff’s expert opines, without support, that a “detection unit” is “a processor that senses (detects) a condition.” (Dkt. No. 91-9 at ¶ 128.) In contrast to the “control unit” term, Plaintiff fails to provide any extrinsic evidence (besides its expert declaration) that the term connotes structure. Plaintiff cites to no dictionary definitions or treatises that provide any meaning or definition to the terms. There is no evidence that the “detection unit” term is used in common parlance, is a term of art, or is used by persons of skill in the pertinent art to designate structure. While a “detection unit” would be understood as something that detects something else, that functional understanding does not connote any specific structure or class of structures. That the patent specification discloses an example of a detection unit in the specification (such as a insertion detector 121) does not by itself impart structural significance to the nonce “unit” term. *MTD Prods.*, 933 F.3d at 1344.

The Court finds that the claim language simply recites function without sufficient structure for performing the recited function. For example, the relevant claim language states that the “detection unit” is configured to “detect whether or not the external device is physically connected to said connection unit.” Although the fact that a term is described according to its function does not necessarily mean that the term fails to designate structure, the Court finds that the “detection unit” term does not provide sufficient structure to one of skill in the art, and the surrounding claim language simply recites the intended function of the term. The Court rejects Plaintiff’s contentions

that the term has a sufficient structure and that the claim is not a means-plus-function limitations. On balance, the Court finds that Defendants have shown this term is a means-plus-function limitations subject to § 112, ¶ 6.

“[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Id.* Under 35 USC §112, ¶ 6, means-plus-function terms are limited “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347.

Here, the parties agree on the recited function but disputes the corresponding structure. Regarding the structure, both parties agree that the corresponding structure includes “insertion detector 121.” The parties dispute whether additional structures proposed by the Plaintiff are “clearly linked” to the recited function.

The parties rely on a single paragraph in the specification as support for this term:

In the second, third, and fourth modifications, **the insertion detector 121**, which is a **mechanism for detecting a physical contact of the connector, is used as means for detecting a physical connection of the USB plug, but the detection mechanism is not particularly limited.** For example, as another means for detecting a physical connection of the USB plug, a current amount that flows through the VBUS line may be measured, and if the measured current amount exceeds a predetermined value, it may be determined that the USB plug is physically connected.

(‘767 patent at col. 18, ll. 13-22 (emphasis added).) The specification makes clear that the insertion detector 121 is corresponding structure for the disputed term. However, the specification also makes clear that the detection mechanism is not particularly limited. The specification expressly mentions that a current flow through a VBUS line may be measured and if it exceeds a predetermined value, that it may be determined that the USB plug is physically connected. It is this additional embodiment that is disputed by the parties. Defendants contend that such a disclosure is not a recitation of sufficiently definite structure to warrant including as corresponding

structure. The Court disagrees with Defendants' contention. The specification is clear that an alternative mechanism can satisfy the means-plus-function limitation of detecting a physical connection. And the specification provides a clear disclosure of how one of skill in the art could detect the external device. The Court finds that such a disclosure is adequate and clearly linked to the recited function to serve as corresponding structure.

On balance, the Court finds that the additional structure proposed by Plaintiff is "clearly linked" to the recited function. However, the Court finds that the reference to such a structure is not simply a "connection detector" as proposed by Plaintiff, but should appropriately be referenced as insertion detector 121 or structural equivalents thereof.

The Court hereby construes the term "**a detection unit configured to detect whether or not the external device is physically connected to said connection unit**" to be a means-plus-function limitation to mean:

Function: detect whether or not the external device is physically connected to said connection unit

Structure: insertion detector 121 or structural equivalents thereof.

11. "a control unit configured to control ..."

<u>Disputed Term</u>	<u>The Parties' Proposed Construction</u>
"a control unit configured to control said display unit to make a display based on data received from the external device with which a communication connection is established via	<p>The parties dispute whether the term has a plain and ordinary meaning (Plaintiff) or whether it is a MPF limitation. To the extent it is a MPF limitation, the parties agree on the recited function but disagree as to the corresponding structure.</p> <p><u>Function:</u> [agreed function] control said display unit to make a display based on data received from the external device with which a communication connection is established via [said/the] connection unit</p> <p><u>Plaintiff's Corresponding Structure:</u></p>

<p>[said/the] connection unit” ('767 patent, claims 1, 11, 13, 14)</p>	<p>CPU, such as CPU 107, programmed or with software programmed to perform the algorithm(s), as described in the claim language; S814, S828, or S831; S830; S1530; '767 Patent at 9:35-40, 10:11- 19, 17:61-18:5, 18:6-12; 13:57-14:40; 15:6-38; 16:26-40; 17:9-24; 17:47-60; and structural equivalents thereof</p> <p><u>Defendants' Corresponding Structure:</u> CPU 107 configured to implement the algorithm disclosed at step S807; step S814; or step S828, and structural equivalents thereof</p>
<p>“control unit acquires class information indicating ...” ('767 patent, claims 1, 13)</p>	<p>The parties dispute whether the term has a plain and ordinary meaning (Plaintiff) or whether it is a MPF limitation. To the extent it is a MPF limitation, the parties agree on the recited function but disagree as to the corresponding structure.</p> <p><u>Function: [agreed function]</u> 1) acquires class information indicating a class of the external device from the external device via said connection unit, (2) controls said display unit to [continue/end] the display based on the data received from the external device at the time of disconnection of the communication connection with the external device if the class of the external device indicated by the class information is a predetermined class, and (3) controls said display unit to [end/continue] the display based on the data received from the external device at the time of disconnection of the communication connection with the external device if the class of the external device indicated by the class information is not the predetermined class</p> <p><u>Plaintiff's Corresponding Structure:</u> CPU, such as CPU 107, programmed or with software programmed, to perform the algorithm(s), as described in the claim language; S804; S815 to S802 / S816; S816 to S815 / S807; any of S821 / S823 / S825 / S827 to S830; S830 to S802 / S803; any of S1323 / S1325 / S1327 to S802; S1515 to S1530 / S816; S816 to S807 / S1515; any of S1521 / S1523 / S1525 / S1527 to S1530; S1530 to S802 / S803; S1530 to S802 / S1533; S1533 to S802 / S803; S1530 to S802 / S1634 to S1635; S1530 to S802 / S1633; S1633 to S802 / S1634 to S1635; S1635 to S802 / S1636 to S1635; S1530 to S802 / either (S1737 / S1634) to S1635; S1530 to S802 / S1733; S1733 to S1737 / S1634; S1737 to S1635; S1634 to S1635; S1635 to S802 / S1636 to S1635; S814; S828; S831; '767 Patent at 9:35-40, 10:11- 19, 17:61-18:5, 18:6-12; 13:57-14:40, 15:6-38, 16:26-40, 17:9-24, 17:47- 60; and structural equivalents thereof</p> <p><u>Defendants' Corresponding Structure:</u></p>

	CPU 107 configured to implement the algorithms disclosed at 10:60-65; step S804; steps S815 to S802; and steps S830 to S803, and structural equivalents thereof
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The disputed “control unit …” term appear in claims 1, 11, 13, and 14 of the ‘767 patent, and in relation to that term, claims 1 and 13 of the ‘767 patent further specify that the “control unit acquires class information indicating …”

(1) The Parties’ Positions

Plaintiff contends that the terms have their plain and ordinary meaning and are not a MPF limitation. (*See, e.g.*, Dkt. No. 91 at 19.) Plaintiff argues that Defendants have not rebutted the presumption that the term is not a MPF limitation. (*Id.*) Plaintiff presents similar arguments as to the “control unit” term in the ‘130 patent. (*Id.*) In particular, Plaintiff argues that a “control unit” has a definite structure and the claim language provides detailed algorithms defining a structure. (*Id.*) To the extent the term is found to be a means-plus-function limitation, Plaintiff generically asserts that its proposed structure is more complete than Defendants’ proposed structure. (*Id.*) In its Reply, Plaintiff states its contention (without support) that the term has a plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 96 at 10.)

Defendants contend that, for the same reason the “control unit” terms in the ‘130 patent are means-plus-function limitations, the “control unit” terms in the ‘767 patent are likewise means-plus-function limitations. (*See, e.g.*, Dkt. No. 92 at 19-20.) Defendants argue that nothing in the claims or the specification suggest that the “control unit” term connotes sufficiently definite structure to one of skill in the art. (*Id.*) To the extent it’s a means-plus-function limitation, Defendants argue that their proposed structure provides the only features that are “clearly linked” to the cited function and is thus correct. (*Id.*)

(2) Analysis

The parties dispute whether the “control unit” term is a means-plus-function term according to § 112 ¶ 6 or whether it has its plain and ordinary meaning. To the extent the term is a means-plus-function limitation, the parties agree on the recited function but dispute the corresponding structure. For the ‘767 patent, the “control unit . . .” term appears in claims 1, 11, 13, and 14 of the ‘767 patent, and in relation to that term, claims 1 and 13 of the ‘767 patent further specify that the “control unit acquires class information indicating . . .” The parties provide the same analysis for both “control unit” terms, which are largely the same analysis and arguments as provided on the similar “control unit” terms in the ‘130 patent.

Claim 1 of the ‘767 patent is representative and is reproduced below in relevant part:

a **control unit** configured to control said display unit to make a display based on data received from the external device with which a communication connection is established via said connection unit,

characterized in that said **control unit** acquires class information indicating a class of the external device from the external device via said connection unit, controls said display unit to continue the display based on the data received from the external device at the time of disconnection of the communication connection with the external device if the class of the external device indicated by the class information is a predetermined class, and controls said display unit to end the display based on the data received from the external device at the time of disconnection of the communication connection with the external device if the class of the external device indicated by the class information is not the predetermined class.

(emphasis added). The claim language requires a “control unit configured to control said display unit to make a display based on data received from the external device with which a communication connection is established via said connection unit.” (See also claims 11, 13, and 14 of the ‘767 patent.) Claim 1 (as well as claim 14) then recites additional detail of the control unit limitation, and specifically requires the control unit to continue or end the display based on a

condition of whether the class information of the external device is or is not the predetermined class.

Because the claims do not recite the word “means,” there is a rebuttable presumption that § 112 ¶ 6 does not apply. *Williamson*, 792 F.3d at 1349. While “unit” is a nonce term that can be “tantamount to using the word means,” *Williamson*, 792 F.3d at 1350, the full term in question is “control unit.” The Court finds that the “control unit” term does have sufficiently definite structure. The “control” modifier imparts structural significance to the term, and, as such, “control unit” is structural. *See id.*; *see also Cellular Communs. Equip. LLC v. HTC Corp.*, No. 6:16-CV-475-KNM, 2018 U.S. Dist. LEXIS 3759 (E.D. Tex. Jan. 8, 2018) (holding that “control unit” is not a means-plus-function limitation because the control unit connotes sufficiently definite structure to one of skill in the art). Defendants have not overcome the presumption that § 112 ¶ 6 does not apply. Thus, the Court finds that the “control unit” terms are not means-plus-function limitations and are not subject to § 112, ¶ 6.

As mentioned *supra*, the parties provide the same substantive analysis to these “control unit” terms as presented for the “control unit” terms in the ‘130 patent. For the same reasons as fully detailed for the “control unit” terms in the ‘130 patent, the Court finds that the “control unit” terms recited in the ‘767 patent connote sufficiently definite structure.

The Court’s finding is further supported by the claim language in the ‘767 patent relating to the “control unit” term. As illustrated above, the claims provide detailed steps for the “control unit” term in relation to the other structural components of the claim. When a structure-connoting term such as “control unit” is coupled with a description of the unit’s operation within the claim, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and § 112, ¶ 6 presumptively will not apply. *See, e.g., MIT*, 462 F.3d at 1355-56. Thus, the Court

finds that the specific description of the operation of the “control unit” within the claim further avoids a finding of a means-plus-function limitation.

Thus, on balance, the Court finds that the “control unit” term connotes sufficiently definite structure to one of skill in the art because “control unit” refers to a known type of hardware and because the relevant claim limitations provide specific steps on how the “control unit” is to operate within the context of the claimed invention and other components. Ultimately, Defendants have failed to overcome the presumption against means-plus-function treatment for this non-means term. Accordingly, the Court rejects Defendants’ proposal of means-plus-function treatment.

The Court further finds that one of ordinary skill in the art, based upon the specification and the claims, would understand the term “control unit” to have its plain and ordinary meaning. For example, the specification repeatedly refers to CPU 107, which both parties agree is disclosed structure for the term. The Court finds that CPU 107 is used in the specification in a manner consistent with the extrinsic dictionary definition of the “control unit” term and Plaintiff’s expert’s definition of a “control unit.” In other words, CPU 107 is used in the specification consistent with a plain and ordinary meaning of the “control unit” term. No further construction to the “control unit” term is necessary. Because this resolves the dispute between the parties, the Court finds that no other terms within the disputed phrase requires further construction. *See U.S. Surgical Corp.*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362.

The Court hereby construes the **“control unit configured to control ...”** terms in claims 1, 11, 13, and 14 of the ‘767 patent to have its **plain and ordinary meaning**.

The Court hereby construes the related language of **“said control unit acquires class information indicating ...”** in claims 1 and 13 of the ‘767 patent to have its **plain and ordinary meaning**.

12. “a display control unit configured to display ...”

<u>Disputed Term</u>	<u>The Parties’ Proposed Construction</u>
[display term 1] “a display control unit configured to display ...” (‘206 patent, claim 1)	<p>The parties dispute whether the term has a plain and ordinary meaning (Plaintiff) or whether it is a MPF limitation. To the extent it is a MPF limitation, the parties agree on the recited function but disagree as to the corresponding structure.</p> <p><u>Function: [agreed function]</u> (1) display, on a display unit, an image received from the external device via the communication unit, and if communication with the external device is disconnected, to stop the display of the image received from the external device; and (2) varies a period of time from the disconnection to the stopping of the display of the image depending on a type of the external device</p> <p><u>Plaintiff’s Corresponding Structure:</u> CPU, such as CPU 107, programmed or with software programmed, to perform the algorithm(s) as described in the claim language; S804; S1515 to S1530 / S816; S816 to S807 / S1515; any of S1521 / S1523 / S1525 / S1527 to S1530; S1530 to S802 / S1634 to S1635; S1530 to S802 / S1633; S1633 to S802 / S1634 to S1635; S1635 to S802 / S1636 to S1635; S1530 to S802 / either (S1737 / S1634) to S1635; S1530 to S802 / S1733; S1733 to S1737 / S1634; S1737 to S1635; S1634 to S1635; S1635 to S802 / S1636 to S1635; S814; S828; S831; as described in ‘767 Patent at 9:35-40, 10:11-19, 17:61-18:5, 18:6-12; 17:9-24, 17:47-60; and structural equivalents thereof</p> <p><u>Defendants’ Corresponding Structure:</u> CPU 107 configured to implement the algorithms disclosed at steps: S814, and S815 to S802; and steps S828 and any of S1521/S1523/S1525/S1527, and then to S1634, S1635 and S802; or the algorithms disclosed at steps: S814, and S1515, and then to (1) S1634 S1635, and S802; or (2) S1737, S1635 and S802; and S828, and any of S1521/S1523/S1525/S1527, and then to (1) S1737, S1635, and S802; or (2) S1634, S1635, and S802; and structural equivalents thereof</p>

<p>[display term 2] “a display control unit configured to display ...” (‘206 patent, claim 7)</p>	<p><u>Function:</u> (1) display, on a display unit, an image received from the external device via the communication unit, and if communication with the external device is disconnected, to stop the display of the image received from the external device; and (2) varies a period of time from the disconnection to the stopping of the display of the image depending on a determination result as to whether the disconnection of the communication with the external device is a physical disconnection or a logical disconnection</p> <p><u>Plaintiff’s Corresponding Structure:</u> CPU, such as CPU 107, programmed or with software programmed, to perform the algorithm(s) as described in the claim language; S804; S1515 to S1530 / S816; S816 to S807 / S1515; any of S1521 / S1523 / S1525 / S1527 to S1530; S1530 to S802 / S1633; S1633 to S802 / S1634 to S1635; S1635 to S802 / S1636 to S1635; S1530 to S802 / S1733; S1733 to S1737 / S1634; S1737 to S1635; S1634 to S1635; S1635 to S802 / S1636 to S1635; S814; S828; S831; as described in ‘767 Patent at 9:35-40, 10:11-19, 17:61- 18:5, 18:6-12; 17:9-24, 17:47-60; and structural equivalents thereof</p> <p><u>Defendants’ Corresponding Structure:</u> CPU 107 configured to implement the algorithms disclosed at steps: S814 and (1) S1633 to S802; (2) S1633 to S1634, S1635, and S802; or the algorithms disclosed at steps: S814 and (1) S1733 to S1737, S1635, and S802; (2) S1733 to S1634, S1635, and S802; and structural equivalents thereof</p>
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A first disputed “display control unit ...” term appear in claim 1 of the ‘206 patent, and a second disputed “display control unit ...” term appear in claim 7 of the ‘206 patent.

(1) The Parties’ Positions

Plaintiff contends that the terms have their plain and ordinary meaning and are not a MPF limitation. (*See, e.g.*, Dkt. No. 91 at 19.) Plaintiff argues that Defendants have not rebutted the presumption that the term is not a MPF limitation. (*Id.*) Plaintiff presents similar arguments as to the “control unit” term in the ‘130 patent. (*Id.*) In particular, Plaintiff argues that a “control unit” has a definite structure and the claim language provides detailed algorithms defining a structure. (*Id.*) To the extent the term is found to be a means-plus-function limitation, Plaintiff generically asserts that its proposed structure is more complete than Defendants’ proposed structure. (*Id.*) In

its Reply, Plaintiff states that the term has a plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 96 at 10.)

Defendants contend that, for the same reason the “control unit” terms in the ‘130 patent and ‘767 patent are means-plus-function limitations, the “display control unit” terms in the ‘206 patent are likewise means-plus-function limitations. (*See, e.g.*, Dkt. No. 92 at 21-23.) Defendants argue that nothing in the claims or the specification suggest that the “display control unit” term connotes sufficiently definite structure to one of skill in the art. (*Id.*) To the extent it’s a means-plus-function limitation, Defendants argue that their proposed structure provides the only features that are “clearly linked” to the cited function and is thus correct. (*Id.*) Defendants argue that the prefix “display” does not provide any more structure to the term as opposed to a simpler “control unit” term. (*Id.* at 21.)

(2) Analysis

The parties dispute whether the “display control unit” term is a means-plus-function term according to § 112 ¶ 6 or whether it has its plain and ordinary meaning. To the extent the term is a means-plus-function limitation, the parties agree on the recited function but dispute the corresponding structure. The “display control unit” term is found in claims 1 and 7 of the ‘206 patent. The parties provide the same analysis for both “display control unit” terms, which are largely the same analysis and arguments as provided on the similar “control unit” terms in the ‘767 patent and the “control unit” terms in the ‘130 patent.

Claim 1 of the ‘206 patent is representative and is reproduced below in relevant part:

a **display control unit** configured to display, on a display unit, an image received from the external device via the communication unit, and if communication with the external device is disconnected, to stop the display of the image received from the external device,

wherein the **display control unit** varies a period of time from the disconnection to the stopping of the display of the image depending on a type of the external device. (emphasis added). Like the “control unit” term in the ‘767 patent, the claim language requires a “display control unit” that is “configured to display . . . an image” from an external device. Claim 1 then recites additional detail of the display control unit limitation, and specifically requires the display control unit to vary the period of time from the disconnection of the external device to the stopping of the display based on the type of the external device.

Because the claims do not recite the word “means,” there is a rebuttable presumption that § 112 ¶ 6 does not apply. *Williamson*, 792 F.3d at 1349. While “unit” is a nonce term that can be “tantamount to using the word means,” *id.*, 792 F.3d at 1350, the full term in question is “display control unit.” The underlying question is whether the “display control unit” term describes sufficiently definite structure to one of ordinary skill in the art. Overall, the Court finds that the “display control unit” term does have sufficiently definite structure. The “control” modifier imparts structural significance to the term, and, as such, “control unit” is structural. *See id.*; *see also Cellular Communs. Equip.* 2018 U.S. Dist. LEXIS 3759. The control unit term is provided additional structural significance by the inclusion of the preceding “display” term. Defendants have not overcome the presumption that § 112 ¶ 6 does not apply. Thus, the Court finds that the “display control unit” terms are not means-plus-function limitations and are not subject to § 112, ¶ 6.

The Court’s finding is further supported by the claim language in the ‘206 patent relating to the “display control unit” term. As illustrated above, the claims provide detailed steps for the “display control unit” term in relation to the other structural components of the claim. When a structure-connoting term such as “control unit” is coupled with a description of the unit’s operation within the claim, sufficient structural meaning generally will be conveyed to persons of ordinary

skill in the art, and § 112, ¶ 6 presumptively will not apply. *See, e.g., MIT*, 462 F.3d at 1355-56. Thus, the Court finds that the specific description of the operation of the “display control unit” within the claim further avoids a finding of a means-plus-function limitation.

Thus, on balance, the Court finds that the “display control unit” term connotes sufficiently definite structure to one of skill in the art because “control unit” refers to a known type of hardware and because the relevant claim limitations provide specific steps on how the “display control unit” is to operate within the context of the claimed invention and other components. Ultimately, Defendants have failed to overcome the presumption against means-plus-function treatment for this non-means term. Accordingly, the Court rejects Defendants’ proposal of means-plus-function treatment.

The Court further finds that one of ordinary skill in the art, based upon the specification and the claims, would understand the term “display control unit” to have its plain and ordinary meaning. For example, the specification repeatedly refers to CPU 107, which both parties agree is disclosed structure for the term. The Court finds that CPU 107 is used in the specification in a manner consistent with the extrinsic dictionary definition of “control unit” and Plaintiff’s expert’s definition of a “control unit.” In other words, CPU 107 is used in the specification consistent with a plain and ordinary meaning of the “control unit” term. No further construction to the “display control unit” term is necessary. Because this resolves the dispute between the parties, the Court finds that no other terms within the disputed phrase requires further construction. *See U.S. Surgical Corp.*, 103 F.3d at 1568.

The Court hereby construes each of the “display control unit configured to display ...” terms in claims 1 and 7 of the ‘206 patent to have its **plain and ordinary meaning**.

C. The ‘413 Patent

The ‘413 patent was filed on May 18, 2007, and claims priority to an earlier patent application filed on May 27, 2004. The ‘413 patent issued on June 29, 2010. The ‘413 patent has a title of “Operation Screen Controlling Method, Operation Screen Controlling Program, and Display Device.”

The ‘413 patent generally relates to controlling an operation screen on a display for operations of a remote control device based on acquired attributes of the remote control device. (See, e.g., ‘413 patent at Abstract; col. 1, ll. 28-40.) FIG. 2 shows a flow chart illustrating one embodiment of the invention, which describes (among other items) acquiring codes and attributes of a remote control device, calculating conformances based on the acquired remote control information, and displaying an operation panel based on the calculated conformances of the remote control information. FIG. 3 shows one embodiment of operation device information for the remote control devices, while FIG. 4 shows the related step of calculating conformances of the GUI layout based on the remote control device information. (See, e.g., *id.* at col. 1, ll. 55-58.) The Abstract of the ‘413 patent is reproduced below:

A controlling method of an operation screen for operations of a remote control device, includes the steps of acquiring an attribute of a remote control device, and determining an operation form corresponding to the remote control device from among a plurality of operation forms previously stored based on the acquired attribute of the remote control device. An additional step includes displaying an operation screen related to the determined operation form displayed.

Claim 1 of the ‘413 patent is reproduced below:

A controlling method of an operation screen for operations of a remote control device, comprising the steps of:
acquiring an attribute of a remote control device;

determining an operation form corresponding to the remote control device from among a plurality of operation forms previously stored based on the acquired attribute of the remote control device; and

displaying an operation screen related to the determined operation form displayed,

wherein, in the step of determining the operation form, the operation form corresponding to the remote control device is determined by evaluating a degree of suitability between the remote control device and each of the plurality of operation forms based on the acquired attribute of the remote control device.

13. “attribute of [a/the] remote control device”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
Plain and ordinary meaning, which is “characteristic intrinsic to [a/the] remote control device”	“remote control identification information or operation device information”

The term “attribute of [a/the] remote control device” appears in claims 1, 5, 7, and 11 of the ‘413 patent.

(1) The Parties’ Positions

Plaintiff contends that the term has its plain and ordinary meaning, which is “characteristic intrinsic” to the remote control device. (*See, e.g.*, Dkt. No. 91 at 25.) Plaintiff argues that the specification describes an “attribute” of the remote control device to be “characteristics intrinsic” to the remote control device, and any further narrowing of the device is improper. (*Id.*)

Defendants contend that the patentee provided a lexicographical definition of the term and that their construction incorporates the full definition. (*See, e.g.*, Dkt. No. 92 at 25-26.) Defendants argue that their complete definition will avoid later disputes about the scope of an “intrinsic characteristic.” (*Id.* at 26.)

In its Reply, Plaintiff contends that there is no express lexicographical definition of the term and that the “intrinsic characteristic” example in the specification is consistent with the term’s plain and ordinary meaning. (*See, e.g.*, Dkt. No. 96 at 25.) Plaintiff argues that Defendants’

additional limitations are limitations imported from embodiments of the specification under the guise of a lexicographical argument. (*Id.* at 25-26.)

In its Supplemental Claim Construction Brief, Plaintiff argues that Defendants should be bound by the construction advocated by Roku, who is in privy with Defendants, in a related IPR. (See, e.g., Dkt. No. 118 at 5 – 6, Exh. 10.)

In their Responsive Supplemental Claim Construction Brief, Defendants argue that they have advocated consistent constructions in this Court as Roku has in the IPR. (Dkt. No. 122 at 5 – 6.)

(2) Analysis

Plaintiff argues a plain and ordinary meaning approach, while Defendants argue that its construction is based on a lexicographical definition in the specification.

Claims 1, 5, 7, and 11 of the ‘413 patent contain the “attribute” term. The claims simply state that an “attribute of [a/the] remote control device” is acquired. The claims provide limited guidance to the parties’ dispute, and do not suggest that anything other than a plain and ordinary meaning is envisioned by the “attribute” term.

The specification provides a clear teaching on what is meant by an attribute in reference to one embodiment:

Here, **the attributes of the remote control device in the invention are characteristics intrinsic to the remote control device.** Moreover, these intrinsic characteristics of the remote control device are the identification information itself for identifying a plurality of remote control devices from one another, and whether or not the remote control device is provided with a pointing device such as a cross key for moving a pointer or focus position on the screen or a specific operation device such as a numeral key.

(‘413 patent at col. 2, ll. 21-29 (emphasis added).) It is clear that the specification considers an “attribute” of the remote control device to be an “intrinsic characteristic” of the remote control

device. Both parties rely on the same portion of the specification (particularly col. 2, ll. 21-29), but to different effects. Defendants argue that the patent provides an express lexicographical definition of the “attribute” term as “intrinsic characteristics,” and then further defines that term in the context of limiting, definitional statements. (*See, e.g., id.* at col. 2, ll. 21-29; col. 5, ll. 1-10.) Plaintiff argues that there is no express definition of the term, and the examples in the specification are merely embodiments that provide a plain and ordinary meaning to the term. In other words, Plaintiff argues that the plain and ordinary meaning of the term is an “intrinsic characteristic,” and the patent simply uses the term consistent with its plain and ordinary meaning.

Overall, the Court rejects Defendants’ arguments. First, the Court does not find that there is an express lexicographical definition of the “attribute” term in the specification. The “attributes” described in the specification are all in context of the illustrated embodiments. While an illustration of the attributes is a “characteristics intrinsic” to the remote control device, the Court does not find that such a generic reference rises to the clear level of a lexicographical definition or disclaimer. The plain and ordinary meaning of the term “attribute” simply implies a quality or characteristic of something. Consistent with that plain meaning, the specification simply states that an attribute of a remote control device is an intrinsic characteristic of the remote control device. In other words, the ‘413 patent provides no meaning to the “attribute” term other than its plain and ordinary meaning. Second, even if there is a definition and/or express limitation of an “attribute” of a remote control device to be an “intrinsic characteristic” of that device, the Court rejects Defendants’ attempts to impose additional limitations to this general definition. At best, the additional exemplary teachings that an intrinsic characteristic may be remote control identification information or operation device information (*see* generally col. 2, ll. 23-29) are simply non-limiting embodiments of the invention that should not be imported into the claims.

See, e.g., Innova/Pure Water, 381 F.3d at 1117. On balance, the Court does not find that these exemplary embodiments are a necessary part of a construction for the “attribute” term.

The Court finds that a plain and ordinary meaning construction is appropriate. The Court finds that one of ordinary skill in the art, based upon the specification and the claims, would understand the “attribute” term to have its plain and ordinary meaning. On its face, the claim language is clear. The claim language does not require the limitations proposed by Defendants. Further, while there is support in the specification that the term “attribute” of a remote control device means an “intrinsic characteristic” of the remote control device, that construction is no different than a plain and ordinary meaning of the term. The Court finds that the term “attribute” is more readily understandable than an “intrinsic characteristic,” and that a plain and ordinary meaning construction would be more helpful to the jury than an “intrinsic characteristic” construction. In this instance, the Court does not find substituting dictionary definitions for an easily understood term necessary, warranted, or helpful.

The Court hereby construes the term “**attribute of [a/the] remote control device**” to have its **plain and ordinary meaning**.

14. “evaluating a degree of suitability”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
Plain and ordinary meaning. Not indefinite.	Indefinite. Alternatively, “evaluating conformances, such as a best match”

The term “evaluating a degree of suitability” appears in claims 1 and 7 of the ‘413 patent.

(1) The Parties’ Positions

Plaintiff contends that Defendants have not met their burden of proving indefiniteness by clear and convincing evidence. (*See, e.g.*, Dkt. No. 91 at 25.) Plaintiff argues that a person of skill

in the art would understand the “degree of suitability” phrase with reasonable certainty. (*Id.* at 25-26.) In particular, Plaintiff argues that a “‘degree of suitability’ would have been understood as a measure of suitability that the claimed display control apparatus uses in the course of selecting what / which operation forms to make available for use with a particular remote control device.” (*Id.* at 26.) Plaintiff argues that the term is “not one of degree but a measure that can be reasonably ascertained.” (*Id.* at 27.) Plaintiff also argues that Defendants (in privy with Petitioner Roku) challenged claims of the ‘413 patent with this term in an IPR petition, thereby admitting that the scope of the claim is reasonably ascertainable by proposing a construction. (*Id.*) Regarding the construction of the term, Plaintiff argues that the “best match” term does not appear in the specification and the “conformance” term appears only in discussions of certain embodiments and is thus improper as an impermissible limitation to the claim. (*Id.*)

Defendants contend that one of skill in the art could not determine the meaning and scope of the claim limitation with reasonable certainty, and thus the claim is indefinite. (*See, e.g.*, Dkt. No. 92 at 23.) Defendants argue that the term is not a term of art with a well-understood meaning, and the specification does not clarify or provide a meaning to the term. (*Id.* at 23-24.) Defendants argue that the term is an inherently subjective term and a term of degree. (*Id.*) Defendants argue that the specification does not provide any standard or guidance for measuring “a degree of suitability.” (*Id.*) Defendants argue that Plaintiff’s explanation of a plain meaning for the term provides no quantification for the term and is inherently subjective. (*Id.* at 25.) Defendants argue that the patent’s one example is insufficient to provide reasonably certain boundaries to the term; however, if the term is to be construed, Defendants argue that its alternative construction is most appropriate. (*Id.*)

In its Reply, Plaintiff argues that Defendants' indefinite arguments are contradicted by its ability to provide a clear, objective standard for the term. (*See, e.g.*, Dkt. No. 96 at 10.)

In its Supplemental Claim Construction Brief, Plaintiff argues that Defendants should be bound by the construction advocated by Roku, who is in privy with Defendants, in a related IPR. (*See, e.g.*, Dkt. No. 118 at Exh. 10.)

In their Responsive Supplemental Claim Construction Brief, Defendants propose that their arguments regarding this term in this Court are consistent with Roku's statements to the PTAB. (Dkt. No. 122 at 3.)

(2) Analysis

The parties dispute whether the term is indefinite and what meaning is most appropriate based on the intrinsic record. The phrase "evaluating a degree of suitability" appears in claims 1 and 7 of the '413 patent. Claim 1 is reproduced in relevant part, which shows the context of the disputed term:

wherein, in the step of determining the operation form, the operation form corresponding to the remote control device is determined by **evaluating a degree of suitability** between the remote control device and each of the plurality of operation forms based on the acquired attribute of the remote control device.

(emphasis added). Claim 7 has substantially similar language as in claim 1. The claim language is clear that "evaluating a degree of suitability" is used to determine the operation form corresponding to the control device. The claim language is also clear that "evaluating a degree of suitability" is between the remote control device and each of the plurality of operation forms based on the acquired attribute of the remote control device.

FIG. 4 is a chart showing a flow of calculating the conformances of the GUI layout and the operation method thereof. ('413 patent at col. 1, ll. 57-58.) More particularly, FIG. 4 shows an example of integrating and totaling operations performed by the execution unit to integrate

information from the remote control device and the individual operation devices. (*Id.* at col. 5, l. 66 – col. 6, l. 5.) The specification provides a detailed analysis, in the context of the example illustrated in FIG. 4, of how conformances are calculated and how the operation screen of the form of the “highest conformance” is specified and assembled. (*See id.* at col. 6, ll. 6-33.) Such calculation operations are also illustrated in steps 2004 through 2006 in FIG. 2. (*See id.*) In this context, the specification discloses as another preferable mode, a “method of evaluating a degree of suitability between the remote control device and each of forms of a plurality of operation screens based on the attributes of the remote control device can be adopted.” (*Id.* at col. 6, ll. 29-33; *see also* col. 3, ll. 34-42.)

Plaintiff’s expert opines that the phrase “evaluating a degree of suitability” is “a step in choosing an operation form by determining how suitable the operation form is for use with a particular remote control device.” (Dkt. No. 91-9 at ¶ 102.) Plaintiff argues that a “degree of suitability” would have been understood as a measure of suitability that the claimed display control apparatus uses in the course of selecting what / which operation forms to make available for use with a particular remote control device. Plaintiff further argues that based on an IPR petition on the ‘413 patent, Defendants (in privy with the petitioner) challenged claims of the ‘413 patent with this term by proposing a construction as to the term, thereby admitting that the scope of the claim is reasonably ascertainable.

In contrast, Defendants’ expert opines that the term does not inform with reasonable certainty the scope of the claim and is thus indefinite. (Dkt. No. 92-8 at ¶¶ 55-58.) Alternatively, Defendants’ expert opines that if the claims are determined to have a definite scope, then the claims require a “conformance operation,” such as one described in the specification and in reference to FIGs. 3 and 4. (*Id.* at ¶¶ 66-81.) Defendants argue that the term is not a term of art, is a term of

degree, and is an inherently subjective term, and is thus indefinite. Alternatively, Defendants argue that if there is any meaning to the term, then the only meaning is based on the specification's teaching of "evaluating conformances." Defendants note that in the IPR for the patent, the petitioner noted that the claims are indefinite but proposed a construction for the term that is the same construction proposed by Defendants.

On balance, the Court finds that there is no dispute that one of ordinary skill in the art would understand the meaning of the term "evaluating a degree of suitability" in the context of the claims and specification. Likewise, the Court finds that there is no dispute that one of ordinary skill in the art would understand with "reasonable certainty" the scope of the invention and the bounds of the claims. The "evaluating a degree of suitability" is not viewed, understood, or construed in a vacuum. In proper context, the claims require a determining step to evaluate whether an operation form is suitable based on the acquired attributes of the remote control device. Likewise, the specification clearly teaches that the "evaluating a degree of suitability" term is understood in relation to calculating the conformances of the operation form and the remote control device, as described in the '413 patent in relation to FIGs. 3 and 4.

The Court rejects Plaintiff's contention that the term has its plain and ordinary meaning and that no construction is necessary. The Court also rejects Plaintiff's argument that limiting the term to "conformance" is an improper limitation to an embodiment of the specification. While the "evaluating a degree of suitability" term may be different and may not require each of the particular steps and operations as disclosed in FIG. 4 and the related teachings in the specification, that does not mean that such teachings are not informative as to the scope and meaning of the term. On the other hand, the Court rejects Defendants' inclusion of the exemplary phrase of "such as a best match," as not being necessary to a construction of the term. Further, the Court rejects Defendants'

arguments that the term is entirely subjective and varies from person to person. Regarding the parties' arguments on the recent petition for IPR on the '413 patent, the Court notes that Defendants are listed in the IPRs as in privy with Petitioner Roku, and that the Petitioner was able to propose a construction on the "degree of suitability" term for the petition for IPR.

The Court finds that there is not a real dispute between the parties as to the "evaluate" word as opposed to the "degree of suitability" phrase. On balance, the Court finds that the best reading of the "degree of suitability" term in light of the intrinsic record requires an amount of conformance, but not necessarily the highest conformance. The claim language does not require a "highest conformance" operation, only that in determining the operation form, the "degree of suitability" must be evaluated between the remote control device and each of the plurality of operation forms based on the acquired attribute of the remote control device. Thus, the Court finds that there is no dispute that one of ordinary skill in the art would understand with "reasonable certainty" the scope of the invention and the bounds of the claims. Accordingly, pursuant to the Supreme Court's holding in *Nautilus*, the Court rejects Defendants' arguments that the claim when "read in light of the specification delineating the patent, and the prosecution history, fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention." The Court finds that Defendants have failed to prove by clear and convincing evidence that the claimed phrase is indefinite; accordingly, the Court rejects Defendants' indefiniteness arguments.

The Court hereby construes the term "**evaluating a degree of suitability**" to mean "**evaluating the amount of conformance.**"

15. "operation device"

<u>Plaintiff's Proposed Construction</u>	<u>Defendants' Proposed Construction</u>
"mechanism on a remote control device for specifying an operation"	"input mechanism on a remote control device for specifying an operation"

The term “operation device” appears in claims 2 and 8 of the ‘413 patent.

(1) The Parties’ Positions

Plaintiff contends that there is no clear restriction in the specification to limit the term to an “input” mechanism, and the claim language does not require such a narrow limitation. (*See, e.g.*, Dkt. No. 91 at 6.)

Defendants contend that the patentee coined the term “operation device” in the specification and is limited by its meaning imported by the specification. (*See, e.g.*, Dkt. No. 92 at 26.) Defendants argue that every disclosure in the patent of an operation device is an “input” mechanism. (*Id.*) Defendants argue that “circuitry” could satisfy the claim limitation as proposed by Plaintiff but should not be an “input” device based on the teachings in the patent. (*Id.*)

In its Reply, Plaintiff contends that “input” mechanism is not required, and if “circuitry” on the remote control devices specifies an operation, such circuitry should be considered as a “control device.” (*See, e.g.*, Dkt. No. 96 at 5.)

In its Supplemental Claim Construction Brief, Plaintiff argues that Defendants should be bound by the construction advocated by Roku, who is in privy with Defendants, in a related IPR. (*See, e.g.*, Dkt. No. 118 at Exh. 10.)

(2) Analysis

Both of the parties propose a construction for the “operation device” term. The parties’ constructions are largely in agreement. The parties’ dispute is limited to whether the word “input” is a necessary modifier for “mechanism” in the term’s construction.

The “operation device” term appears in at least claims 2 and 8 of the ‘413 patent, which depend on independent claims 1 and 7, respectively. Claims 1 and 7 of the ‘413 patent require determining “an operation form corresponding to the remote control device from among a plurality

of operation forms previously stored . . . ”. Claims 2 and 8 specify that the “plurality of operation forms are different from each other in a combination of operation devices selected for use therein from among a plurality of operation devices” (emphasis added). Claims 3 and 9 further specify that the operation device of claims 2 and 8 “include at least one device of a pointing device, a key device, a touch panel device and a dial device.”

The specification has numerous references to the “operation device” term. For example, FIG. 3 shows operation device information for different remote control devices. FIG. 3 illustrates the presence or absence of the operation device, as well as designations of the operation devices. (See, e.g., ‘413 patent, col. 5, ll. 11-22.) FIG. 3 illustrates that the operation devices may be a pointing device, a ten key device, or liquid crystal touch panel, or a dial device. (See *id.* at col. 5, ll. 6-8, ll. 42-51.) No other devices are disclosed in the ‘413 patent for the “operation device” term.

Defendants argue that because the only examples of an “operation device” in the patent are all “input” mechanisms, and because the “operation device” term is a coined term by the patentee, that the term must necessarily be limited to an “input” mechanism. Other than mere examples in the specification, Defendants are unable to point to any clear disclaimer or definition in the specification to support their position. Defendants further argue that their position is confirmed by various dependent claims which repeat the examples described in the specification.

Overall, the Court rejects Defendants’ arguments. The Court does not find support in the claim language for requiring Defendants’ proposed “input” limitation. In particular, the claim language itself does not require the operation device to be an “input” mechanism. While dependent claims 3 and 9 may provide examples of an operation device that may be an input mechanism, the mere existence of such dependent claims do not require the “operation device” term itself to be

limited to an “input” mechanism. Indeed, the Court finds that the existence of dependent claims that narrow the “operation device” term to certain “input” devices suggests that the broader “operation device” term is not so limited. Likewise, the mere fact that the specification discloses embodiments for an operation device that may all be “input” mechanisms is not dispositive. Defendants have not pointed to clear language in the intrinsic record of lexicography, disavowal or disclaimer mandating that the operation devices must be limited to an “input” mechanism. *See GE Lighting Solutions*, 750 F.3d at 1309; *see also Cordis Corp. v. Boston Scientific Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009). The Court finds that there is no lexicography, disavowal or disclaimer to require the limitations suggested by Defendants, and rejects Defendants’ arguments to the contrary. At best, the Court finds that the examples in the specification are non-limiting embodiments of the invention that should not be imported into the claims. The Federal Circuit has consistently held that “particular embodiments appearing in the written description will not be used to limit claim language that has broader effect.” *Innova/Pure Water*, 381 F.3d at 1117. Even where a patent describes only a single embodiment, absent a “clear intention to limit the claim scope,” it is improper to limit the scope of otherwise broad claim language by resorting to a patent’s specification. *Id.*; *see also Liebel-Flarsheim*, 358 F.3d at 906; *Comark*, 156 F.3d at 1187; *Arlington*, 632 F.3d at 1254; *Phillips*, 415 F.3d at 1323.

As mentioned above, the parties’ only dispute is the presence of the word “input.” The Court rejects Defendants’ inclusion of the “input” word. Accordingly, the Court hereby construes the term **“operation device”** to mean **“mechanism on a remote control device for specifying an operation.”**

16. “operation form”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
“layout for an operation screen”	“preset layout for an operation screen”

The term “operation form” appears in claims 1, 2, 4, 7, 8, and 10 of the ‘413 patent.

(1) The Parties’ Positions

Plaintiff contends that “preset forms” are discussed in the specification only as examples of an embodiment, and are not restrictive. (*See, e.g.*, Dkt. No. 91 at 6.) Plaintiff argues that Defendants’ construction improperly imports a limitation from an embodiment into the claim. (*Id.*)

Defendants contend that the patentee coined the term “operation form” in the specification and is limited by its meaning imported by the specification. (*See, e.g.*, Dkt. No. 92 at 27.) Defendants argue that the specification teaches that the forms are “individually preset.” (*Id.*) Defendants further argue that because the claim requires the operation forms to be “previously stored,” that a “layout must be set before it can be stored,” which supports its construction. (*Id.*)

In its Reply, Plaintiff contends that Defendants’ construction improperly limits the claim term to an embodiment of the specification. (*See, e.g.*, Dkt. No. 96 at 5-6.) Plaintiff also argues that no intrinsic evidence requires a layout to “be set before it can be stored” and further argues that the claim language requiring the operations to be “previously stored” does not necessarily require the form to be “preset.” (*Id.*)

In its Supplemental Claim Construction Brief, Plaintiff argues that Defendants should be bound by the construction advocated by Roku, who is in privy with Defendants, in a related IPR. (*See, e.g.*, Dkt. No. 118 at Exh. 10.)

In its Responsive Supplemental Claim Construction Brief, Defendants argue they have put forward constructions of “operation form” as a “preset layout” in this Court, which is consistent with the construction put forward by Roku in the IPRs. (Dkt. No. 122 at 4.)

(2) Analysis

Both of the parties propose a construction for the “operation form” term. The parties’

constructions are largely in agreement. The parties' dispute is limited to whether the word "preset" is a necessary modifier for "layout" in the term's construction.

The "operation form" term appears in claims 1, 2, 4, 7, 8, and 10 of the '413 patent. For example, claims 1 and 7 of the '413 patent require determining "an operation form corresponding to the remote control device from among a plurality of operation forms previously stored..." (emphasis added). Various dependent claims utilize the "operation form" term and specify that "the plurality of operation forms are different from each other ..." (*See, e.g.*, '413 patent at claims 2, 4, 8, and 10.)

The specification has numerous references to the "operation form" term. The specification is clear that the "operation form" corresponds to the remote control device. In one embodiment, the specification mentions that an operation screen of a specific form is displayed. (*See, e.g.*, '413 patent at col. 5, l. 32 – col. 6, l. 33.) In one instance of this embodiment, the specification mentions that "a plurality of forms such as a form A, a form B and a form C are individually preset so that any of the operation screens of the forms may be selectively displayed." (*Id.* at col. 5, ll. 35-37 (emphasis added).) Defendants argue that because the specification discloses an embodiment where the layout is "preset," and because the "operation form" term is a coined term by the patentee, that the term must necessarily be limited to a "preset" layout. Other than a mere example in the specification, Defendants are unable to point to any clear disclaimer or definition in the specification to support its position. Defendants further argue that their position is confirmed by the "previously stored" language in the claims.

Overall, the Court rejects Defendants' arguments. The Court does not find support in the claim language for requiring Defendants' proposed "preset" layout limitation. In particular, the claim language itself does not require the operation form to be a "preset" form. Had the patentee

wanted to limit the “operation form” to a “preset” form it could have easily done so in the claims. While the claim language does require the operation forms to be “previously stored,” that does not necessarily mean that such forms must be “preset,” and the Court disagrees with Defendants’ argument that a layout must be preset before it can be stored. Likewise, the mere fact that the specification discloses an embodiment for an operation form that may be “preset” is not dispositive. Defendants have not pointed to clear language in the intrinsic record of lexicography, disavowal or disclaimer mandating that the operation forms must be limited to a “preset” form. *See GE Lighting Solutions, LLC* 750 F.3d at 1309; *see also Cordis Corp.*, 561 F.3d at 1329. The Court finds that there is no lexicography, disavowal or disclaimer to require the limitations suggested by Defendants, and rejects Defendants’ arguments to the contrary. At best, the Court finds that the examples in the specification are non-limiting embodiments of the invention that should not be imported into the claims. The Federal Circuit has consistently held that “particular embodiments appearing in the written description will not be used to limit claim language that has broader effect.” *Innova/Pure Water*, 381 F.3d at 1117. Even where a patent describes only a single embodiment, absent a “clear intention to limit the claim scope,” it is improper to limit the scope of otherwise broad claim language by resorting to a patent’s specification. *Id.*; *see also Liebel-Flarsheim*, 358 F.3d at 906; *Comark*, 156 F.3d at 1187; *Arlington*, 632 F.3d at 1254; *Phillips*, 415 F.3d at 1323.

As mentioned above, the parties’ only dispute is the presence of the word “preset.” The Court rejects Defendants’ inclusion of the “preset” word. The Court hereby construes the term “**operation form**” to mean “**layout for an operation screen**.”

17. “an acquiring unit which acquires...”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
<p>Plain and ordinary meaning, not a MPF limitation. If construed as a MPF:</p> <p><u>Function</u>: acquires an attribute of a remote control device</p> <p><u>Structure</u>: Execution unit, such as execution unit 201, programmed or with software programmed, to perform the algorithm(s) as described in the claim language; S2002, S2003; S602; 7:33-8:14, 8:23-49; and structural equivalents thereof</p>	<p>MPF limitation</p> <p><u>Function</u>: acquires an attribute of a remote control device</p> <p><u>Structure</u>: execution unit 201 configured to perform steps 2002-2003, and structural equivalents thereof</p>

The term “an acquiring unit which acquires an attribute of a remote control device” appears in claim 7 of the ‘413 patent.

(1) The Parties’ Positions

Plaintiff contends that the term has its plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 91 at 29.) Plaintiff argues that Defendants have not rebutted the presumption that the term is not a MPF limitation. (*Id.*) Plaintiff argues that the “acquiring unit” term is a well understood term, and includes a processor such as a CPU. (*Id.*) Plaintiff argues that the claim language recites the unit’s objectives and how it operates within the context of the claimed invention. (*Id.* at 29-30.) To the extent the term is found to be a means-plus-function limitation, Plaintiff generically asserts that its proposed structure is more complete than Defendants’ proposed structure. (*Id.*)

Defendants contend that the “acquiring unit” term does not connote sufficiently definite structure to one of skill in the art. (*See, e.g.*, Dkt. No. 92 at 27-28.) Defendants argue that the term is described as a generic black-box structure and there is no meaningful description of structure for the term in the specification or known to one of skill in the art. (*Id.*) Defendants further argue

that the claim language does not provide sufficient structure for the term to avoid being a means-plus-function limitation. (*Id.* at 28.) Defendants argue that their proposed construction is the only corresponding structure that is clearly linked to the recited function, and Plaintiff's structure includes unnecessary features. (*Id.*)

In its Reply, Plaintiff states its contention (without support) that the term has a plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 96 at 10.)

In its Supplemental Claim Construction Brief, Plaintiff argues that Defendants should be bound by the construction advocated by Roku, who is in privy with Defendants, in a related IPR. (*See, e.g.*, Dkt. No. 118 at Exh. 10.)

(2) Analysis

The parties dispute whether the “acquiring unit” term is a means-plus-function term according to § 112 ¶ 6 or whether it has its plain and ordinary meaning. To the extent the term is a means-plus-function limitation, the parties agree on the recited function but dispute the corresponding structure. The “acquiring unit” term is found in claim 7 of the ‘413 patent, which is reproduced in relevant part: “an acquiring unit which acquires an attribute of a remote control device.”

Because the claims do not recite the word “means,” there is a rebuttable presumption that § 112 ¶ 6 does not apply. *Williamson*, 792 F.3d at 1349. While “unit” is a nonce term that can be “tantamount to using the word means,” see *id.*, 792 F.3d at 1350, the full term in question is “acquiring unit.” The underlying question is whether the “acquiring unit” term describes sufficiently definite structure to one of ordinary skill in the art. Overall, the Court finds that this term does not have sufficiently definite structure and the claim language as a whole recites function

without reciting sufficient structure for performing that function. Thus, the Court finds that this term is a means-plus-function limitation subject to § 112, ¶ 6.

The Court finds that the “acquiring unit” term does not connote sufficiently definite structure to one of skill in the art. Plaintiff’s expert opines, without support, that an “acquiring unit” is “a processor, such as a CPU, that acquires data.” (Dkt. No. 91-9 at ¶ 82.) In contrast to the “control unit” term, Plaintiff fails to provide any extrinsic evidence (besides its expert declaration) that the term connotes structure. Plaintiff cites to no dictionary definitions or treatises that provide any meaning or definition to the terms. There is no evidence that the “acquiring unit” term is used in common parlance, is a term of art, or is used by persons of skill in the pertinent art to designate structure. While a “acquiring unit” would be understood as something that acquires something else, that functional understanding does not connate any specific structure or class of structures. That the patent specification discloses an “execution unit 201” (which may be used as structure for the “acquiring unit” term) does not by itself impart structural significance to the nonce “unit” term. *MTD Prods. Inc.*, 933 F.3d at 1344.

The Court finds that the claim language simply recites function without any sufficient structure for performing the recited function. For example, the relevant claim language states that the “acquiring unit” is configured to “acquire an attribute of a remote control device.” Although the fact that a term is described according to its function does not necessarily mean that the term fails to designate structure, the Court finds that the “acquiring unit” term does not provide sufficient structure to one of skill in the art, and the surrounding claim language simply recites the intended function of the term. The Court rejects Plaintiff’s contentions that the term has a sufficient structure and that the claim is not a means-plus-function limitations. On balance, the

Court finds that Defendants have met their burden in showing this term is a means-plus-function limitations subject to § 112, ¶ 6.

“[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Medtronic*, 248 F.3d at 1311. Under 35 USC §112, ¶ 6, means-plus-function terms are limited “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347.

Here, the parties agree on the recited function but disputes the corresponding structure. Regarding the structure, both parties agree that the corresponding structure includes “execution unit 201” and “steps 2002 and 2003” performed by the execution unit. The parties dispute whether additional structures proposed by the Plaintiff are “clearly linked” to the recited function.

The specification does not use the “acquiring unit” term. Instead, the specification discloses an “execution unit 201,” which utilizes software programs to execute certain operations as detailed in the specification. (‘413 patent at col. 4, ll. 45-51; FIG. 1.) The patent specification provides two embodiments. The first embodiment is illustrated in FIGs. 1 and 2, while the second embodiment is illustrated in FIGs. 7 and 8. (See, e.g., *id.* at col. 1, ll. 48-54; col. 1, l. 65 – col. 2, l. 2; col. 4, ll. 31-38; col. 7, ll. 30-44.) Referring to FIG. 2, step 2002 discloses acquiring identification codes from the remote control device and step 2003 discloses acquiring information/attributes of the remote control device. (See also ‘413 patent, col. 4, l. 52 – col. 5, l. 10.) This disclosure aligns with the claim language and in particular the recited function of the “acquiring unit” term. The Court finds that these steps – as agreed to by the parties – is clearly linked to the recited function.

Plaintiff attempts to include an additional step and disclosures in the specification in relation to the second embodiment disclosed in the ‘413 patent specification. On balance, the

Court does not find that the additional structures proposed by Plaintiff are “clearly linked” to the recited function. First, Plaintiff proposes additional step S602, which is illustrated in FIG. 6. The specification mentions that this step includes extracting identification codes from the remote control device, not that it is used for acquiring attributes of the remote control device. (‘413 patent at col. 7, ll. 2-10; FIG. 6.) Likewise, the rest of FIG. 6 and corresponding specification does not discuss attributes. (*See id.*) Second, Plaintiff’s proposed structure generically cites to large portions of the specification (col. 7, l. 33 – col. 8, l. 14; col. 8, ll. 23-49) in relation to the second embodiment in FIGs. 8 and 9 without any clear identification of a particular step. However, this portion of the specification is not clearly related to the recited function and never mentions acquiring attributes of the remote control device. The mere fact that steps may be performed by an execution unit does not necessarily make those unrelated steps corresponding structure for a particular function. Third, Plaintiff’s proposed construction includes the generic language that the execution unit is “programmed to perform the algorithms as described in the claim language.” While it is necessarily true that the execution unit must be programmed to perform the recited function, such a bare assertion is inadequate to serve as corresponding structure. The language proposed by Defendants of an execution unit configured to perform particular steps (steps 2002 and 2003) is more accurate.

Accordingly, the Court rejects the corresponding structures proposed by Plaintiff. The Court is not convinced that the additional language and structures proposed by Plaintiff is “clearly linked” and/or necessary to the recited functions. A “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Medtronic*, 248 F.3d at 1311. The focus of the “corresponding structure” inquiry is not merely whether a structure is capable of performing the

recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” *Id.* The Court finds that the structures proposed by Defendants are those structures which are “clearly linked” to the recited function.

The Court hereby construes the term “**an acquiring unit which acquires an attribute of a remote control device**” to be a means-plus-function limitation to mean:

Function: acquires an attribute of a remote control device

Structure: execution unit 201 configured to perform steps S2002 and S2003, or structural equivalents thereof.

18. “a determining unit which determines...”

<u>Plaintiff's Proposed Construction</u>	<u>Defendants' Proposed Construction</u>
<p>Plain and ordinary meaning, not a MPF limitation. Not indefinite. If construed as a MPF:</p> <p><u>Function:</u> determines an operation form corresponding to the remote control device from among a plurality of operation forms previously stored in a storing unit based on the attribute of the remote control device acquired by the acquiring unit . . . wherein the determining unit determines the operation form corresponding to the remote control device by evaluating a degree of suitability between the remote control device and each of the plurality of operation forms based on the attribute of the remote control device acquired by the acquiring unit</p> <p><u>Structure:</u> Execution unit, such as execution unit 201, programmed or with software programmed, to perform the algorithm(s) as described in the claim language; S2004, S2005; S603; S604; FIG. 4; 5:32-6:36; 7:11-19; and structural equivalents thereof</p>	<p>Indefinite. Alternatively, a MPF limitation</p> <p><u>Function:</u> determines, by evaluating a degree of suitability between the remote control device and each of the plurality of operation forms based on the attribute of the remote control device acquired by the acquiring unit, an operation form corresponding to the remote control device from among a plurality of operation forms previously stored in a storing unit</p> <p><u>Structure:</u> execution unit 201 configured to perform steps 2004-2005 and layout/operation definition database 18 configured to store definitions of the GUI parts suited for the remote control device 30, and structural equivalents thereof</p>

The term “a determining unit which determines...” appears in claim 7 of the ‘413 patent.

(1) The Parties' Positions

Plaintiff contends that the term has its plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 91 at 29.) Plaintiff argues that Defendants have not rebutted the presumption that the term is not a MPF limitation. (*Id.*) Plaintiff argues that the “determining unit” term is a well understood term, and includes a processor such as a CPU. (*Id.*) Plaintiff argues that the claim language recites the unit’s objectives and how it operates within the context of the claimed invention. (*Id.* at 29-30.) To the extent the term is found to be a means-plus-function limitation, Plaintiff generically asserts that its proposed structure is more complete than Defendants’ proposed structure. (*Id.*) In its Reply, Plaintiff states that the term has a plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 96 at 10.)

Defendants contend that the “determining unit” term does not connote sufficiently definite structure to one of skill in the art. (*See, e.g.*, Dkt. No. 92 at 29.) Defendants argue that the term is a generic term and there is no meaningful description of structure for the term in the specification or known to one of skill in the art. (*Id.*) Defendants further argue that the claim language does not provide sufficient structure for the term to avoid being a means-plus-function limitation. (*Id.*) Defendants argue that their proposed construction is the only corresponding structure that is clearly linked to the recited function, and Plaintiff’s structure includes unnecessary features. (*Id.* at 29-30.)

(2) Analysis

The parties dispute whether the “determining unit” term is a means-plus-function term according to § 112 ¶ 6 or whether it has its plain and ordinary meaning. To the extent the term is a means-plus-function limitation, the parties disagree on the recited function and the corresponding structure. Defendants present an indefiniteness argument to the term, but it is based on the

“evaluating a degree of suitability” language found within the recited function of the term, which is a separately disputed term between the parties. As previously discussed in this opinion, the Court rejects Defendants’ indefiniteness arguments as to the “evaluating a degree of suitability” term, and thus rejects any similar indefiniteness arguments as to this term for the same reasons.

The “determining unit” term is found in claim 7 of the ‘413 patent, which is reproduced below in relevant part:

a **determining unit** which determines an operation form corresponding to the remote control device from among a plurality of operation forms previously stored in a storing unit based on the attribute of the remote control device acquired by the acquiring unit; and ...

wherein the **determining unit** determines the operation form corresponding to the remote control device by evaluating a degree of suitability between the remote control device and each of the plurality of operation forms based on the attribute of the remote control device acquired by the acquiring unit.

(emphasis added).

Because the claims do not recite the word “means,” there is a rebuttable presumption that § 112 ¶ 6 does not apply. *Williamson*, 792 F.3d at 1349. While “unit” is a nonce term that can be “tantamount to using the word means,” see *id.* at 1350, the full term in question is “determining unit.” The underlying question is whether the “determining unit” term describes sufficiently definite structure to one of ordinary skill in the art. Overall, the Court finds that this term does not have sufficiently definite structure and the claim language as a whole recites function without reciting sufficient structure for performing that function. Thus, the Court finds that this term is a means-plus-function limitation subject to § 112, ¶ 6.

The Court finds that the “determining unit” term does not connote sufficiently definite structure to one of skill in the art. Plaintiff’s expert opines, without support, that a “determining unit” is “a processor, such as a CPU, that makes a determination based on inputs it receives.” (Dkt.

No. 91-9 at ¶ 95.) In contrast to the “control unit” term, Plaintiff fails to provide any extrinsic evidence (besides its expert declaration) that the term connotes structure. Plaintiff cites to no dictionary definitions or treatises that provide any meaning or definition to the terms. There is no evidence that the “determining unit” term is used in common parlance, is a term of art, or is used by persons of skill in the pertinent art to designate structure. While a “determining unit” would be understood as something that determines or makes a determination, that functional understanding does not connote any specific structure or class of structures. That the patent specification discloses an “execution unit 201” (which may be used as structure for the “determining unit” term) does not by itself impart structural significance to the nonce “unit” term. *MTD Prods.*, 933 F.3d at 1344.

The Court finds that the claim language simply recites function without any sufficient structure for performing the recited function. For example, the relevant claim language states that the “determining unit” is configured to “determine an operation form . . .”. Although the fact that a term is described according to its function does not necessarily mean that the term fails to designate structure, the Court finds that the “determining unit” term does not provide sufficient structure to one of skill in the art, and the surrounding claim language simply recites the intended function of the term. The Court rejects Plaintiff’s contentions that the term has a sufficient structure and that the claim is not a means-plus-function limitation. On balance, the Court finds that Defendants have met their burden in showing this term is a means-plus-function limitation subject to § 112, ¶ 6.

Once it is determined that a term is a means-plus-function limitation, construing a means-plus-function limitation involves multiple steps. “The first step . . . is a determination of the function of the means-plus-function limitation.” *Medtronic*, 248 F.3d at 1311. “[T]he next step is

to determine the corresponding structure disclosed in the specification and equivalents thereof.”

Id. Under 35 USC §112, ¶ 6, means-plus-function terms are limited “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347.

Regarding the recited function, the parties appear to dispute the most accurate way to recite the function. The claim language provides the function in two separate parts within claim 7. The first part is a “determining unit which determines an operation form corresponding to the remote control device . . .,” and the second part is presented later within the claim by the language “wherein the determining unit determines the operation form corresponding to the remote control device by evaluating a degree of suitability . . .”. Plaintiff’s proposal mimics the claim language word for word. Defendants’ proposal rearranges the words in the claims to make the recited function clearer and to eliminate duplicative language. The parties provide no arguments as to the substantive differences, if any, to the parties’ differing functions. The Court does not find any material difference to the parties’ functions and finds them to be substantially the same. Nevertheless, based on the structure of the claim, the Court finds that Defendants’ proposed function is most appropriate.

Regarding the structure, both parties agree that the corresponding structure includes “execution unit 201” and “steps 2004 and 2005” performed by the execution unit. The parties dispute whether additional structures proposed by the Plaintiff and Defendants are “clearly linked” to the recited function.

The specification does not use the “determining unit” term. Instead, the specification discloses an “execution unit 201,” which utilizes software programs to execute certain operations as detailed in the specification. (‘413 patent at col. 4, ll. 45-51; FIG. 1.) The patent specification

provides two embodiments. The first embodiment is illustrated in FIGs. 1 and 2, while the second embodiment is illustrated in FIGs. 7 and 8. (*See, e.g., id.* at col. 1, ll. 48-54; col. 1, l. 65 – col. 2, l. 2; col. 4, ll. 31-38; col. 7, ll. 30-44.) Referring to FIG. 2, steps 2004 and 2005 describe calculating conformances and specifying the form of the highest conformance. (*See, e.g.,* '413 patent at col. 5, l. 42 – col. 6, l. 34.) This disclosure aligns with the claim language and in particular the recited function of the “determining unit” term. The Court finds that these steps – as agreed to by the parties – is clearly linked to the recited function.

Plaintiff attempts to include additional steps and disclosures in the specification in relation to the second embodiment disclosed in the '413 patent specification. On balance, the Court does not find that the additional structures proposed by Plaintiff are “clearly linked” to the recited function. First, Plaintiff proposes additional steps S603 and S604, which are illustrated in FIG. 6, as well as steps disclosed at col. 7, ll. 11-19. This portion of the specification does not mention determining an operation form based on acquired attributes, nor does it refer to evaluating a degree of suitability. Second, Plaintiff’s proposed structure cites to FIG. 4 and generically to portions of the specification in relation to FIG. 4 and steps 2004 and 2005. *See, e.g.,* col. 5, l. 32 – col. 6, l. 36. While Plaintiff’s disclosure overlaps with the corresponding structure of steps 2004 and 2005, which are disclosed in FIG. 4 and portions of the relied upon passage, the Court finds that a generic reference to such disclosures is not appropriate for the corresponding structure. Instead, the Court finds that specific references to steps 2004 and 2005 is most appropriate and the portion of the specification that is “clearly linked” to the recited function. Third, Plaintiff’s proposed construction includes the generic language that the execution unit is “programmed to perform the algorithms as described in the claim language.” While it is necessarily true that the execution unit must be programmed to perform the recited function, such a bare assertion is inadequate to serve

as corresponding structure. The language proposed by Defendants of an execution unit configured to perform particular steps is more accurate. Accordingly, the Court rejects the additional corresponding structures proposed by Plaintiff.

Defendants attempts to include the additional language of “layout/operation definition database 18 ...” in its corresponding structure. On balance, the Court does not find that the additional structure proposed by Defendants is “clearly linked” to and/or necessary to perform the recited function. While step 2004 mentions calculating conformances to definition files in a layout/operation definition database, and the specification has disclosure that the execution unit 201 retrieves a layout/operation definition database 18 and reads out definitions of the GUI parts suited for the remote control device (*see* col. 5, ll. 23-28), the Court is not convinced that such a disclosure is a necessary structure for the recited function as opposed to the already cited steps of 2004 and 2005. Further, there is a difference in having an execution unit merely access or retrieve information from a database as opposed to requiring the corresponding structure of the determining unit to further include the database. On balance, the Court finds that specific references to steps 2004 and 2005 is most appropriate and the portion of the specification that is “clearly linked” to the recited function. Accordingly, the Court rejects the additional corresponding structures proposed by Defendants.

The Court hereby construes the term “a determining unit which determines an operation form corresponding to the remote control device from among a plurality of operation forms previously stored in a storing unit based on the attribute of the remote control device acquired by the acquiring unit ... wherein the determining unit determines the operation form corresponding to the remote control device by evaluating a degree of suitability between the remote control device and each of the plurality of operation forms based on the

attribute of the remote control device acquired by the acquiring unit” to be a means-plus-function limitation to mean:

Function: determines, by evaluating a degree of suitability between the remote control device and each of the plurality of operation forms based on the attribute of the remote control device acquired by the acquiring unit, an operation form corresponding to the remote control device from among a plurality of operation forms previously stored in a storing unit

Structure: execution unit 201 configured to perform steps 2004 and 2005, or structural equivalents thereof.

19. “a controlling unit which displays ...”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendants’ Proposed Construction</u>
<p>Plain and ordinary meaning, not a MPF limitation. If construed as a MPF:</p> <p><u>Function:</u> displays an operation screen related to the operation form which is determined by the determining unit displayed</p> <p><u>Structure:</u> Execution unit, such as execution unit 201, programmed or with software programmed, to perform the algorithm(s) as described in the claim language; S1002; S2007, S2008; and structural equivalents thereof</p>	<p>MPF limitation</p> <p><u>Function:</u> displays an operation screen related to the operation form which is determined by the determining unit displayed</p> <p><u>Structure:</u> execution unit 201 configured to perform steps 2006-2008 based on data in the layout/operation definition database 18, and display 22 configured to display an operation screen, and structural equivalents thereof</p>

The term “a controlling unit which displays ...” appears in claim 7 of the ‘413 patent.

(1) The Parties’ Positions

Plaintiff contends that the term has its plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 91 at 29.) Plaintiff argues that Defendants have not rebutted the presumption that the term is not a MPF limitation. (*Id.*) Plaintiff argues that the “controlling unit” term is a well understood term, and includes a processor such as a CPU. (*Id.*) Plaintiff argues that

the claim language recites the unit's objectives and how it operates within the context of the claimed invention. (*Id.* at 29-30.) Plaintiff asserts that the "controlling unit" is the same as a "control unit," and that one of skill in the art would understand the units to be interchangeable and describing the same device, and thus Plaintiff relies on the same arguments, dictionary definitions, and case law as the prior "control unit" terms. (*Id.* at 30.) To the extent the term is found to be a means-plus-function limitation, Plaintiff generically asserts that its proposed structure is more complete than Defendants' proposed structure. (*Id.*) In its Reply, Plaintiff states that the term has a plain and ordinary meaning and is not a MPF limitation. (*See, e.g.*, Dkt. No. 96 at 10.)

Defendants contend that, for the same reason the "control unit" terms in the '130 patent, the "controlling unit" term in the '413 patent is likewise means-plus-function limitations. (*See, e.g.*, Dkt. No. 92 at 30.) Defendants argue that "controlling unit" does not recite sufficiently definite structure for performing the claimed function and thus should be construed as a MPF limitation. (*Id.*) To the extent it's a means-plus-function limitation, Defendants argue that the proposed structure provides the only features that are "clearly linked" to the cited function and Plaintiff relies upon additional unnecessary features. (*Id.*)

(2) Analysis

The parties dispute whether the "controlling unit" term is a means-plus-function term according to § 112 ¶ 6 or whether it has its plain and ordinary meaning. To the extent the term is a means-plus-function limitation, the parties disagree on the recited function and the corresponding structure. The parties largely provide the same analysis and arguments as provided on the similar "control unit" terms in the '130 patent.

The "controlling unit" term is found in claim 7 of the '413 patent, which is reproduced below in relevant part:

a **controlling unit** which displays an operation screen related to the operation form which is determined by the determining unit displayed,
(emphasis added).

Because the claim does not recite the word “means,” there is a rebuttable presumption that § 112 ¶ 6 does not apply. *Williamson*, 792 F.3d at 1349. While “unit” is a nonce term that can be “tantamount to using the word means,” *id.* at 1350, the full term in question is “controlling unit.” The underlying question is whether the “controlling unit” term describes sufficiently definite structure to one of ordinary skill in the art. Overall, the Court finds that the “controlling unit” term does have sufficiently definite structure. The “controlling” modifier imparts structural significance to the term, and, as such, “controlling unit” is structural. *See id.*; *see also Cellular Communs. Equip.*, 2018 U.S. Dist. LEXIS 3759. Defendants have not overcome the presumption that § 112 ¶ 6 does not apply. Thus, the Court finds that the “controlling unit” term is not means-plus-function limitations and is not subject to § 112, ¶ 6.

As mentioned herein, the parties provide the same substantive analysis to the “controlling unit” term as presented for the “control unit” terms in the ‘130 patent. The parties have presented no reason – and the Court finds none – why “controlling unit” should have a different means-plus-function application as opposed to “control unit.” During the claim construction hearing, Defendants’ counsel confirmed that there is no difference between the meaning of “control unit” and “controlling unit.” For the same reasons as fully detailed for the “control unit” terms in the ‘130 patent, the Court finds that the “controlling unit” term in the ‘413 patent connotes sufficiently definite structure.

The Court’s finding is further supported by the claim language in the ‘413 patent relating to the “controlling unit” term. All that is required by the claim language is for the controlling unit to display an operation screen related to the operation form, where the operation form is separately

determined by the determining unit. When a structure-connoting term such as “controlling unit” is coupled with a description of the unit’s operation within the claim, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and § 112, ¶ 6 presumptively will not apply. *See, e.g., MIT*, 462 F.3d at 1355-56. Thus, the Court finds that the specific description of the operation of the “controlling unit” term within the claim further avoids a finding of a means-plus-function limitation.

Thus, on balance, the Court finds that the “controlling unit” term connotes sufficiently definite structure to one of skill in the art because “controlling unit” refers to a known type of hardware and because the relevant claim limitations provide specific steps on how the “controlling unit” is to operate within the context of the claimed invention and other components. Ultimately, Defendants have failed to overcome the presumption against means-plus-function treatment for this non-means term. Accordingly, the Court rejects Defendants’ proposal of means-plus-function treatment.

The Court further finds that one of ordinary skill in the art, based upon the specification and the claims, would understand “controlling unit” to have its plain and ordinary meaning. For example, the specification repeatedly refers to execution unit 201, which both parties agree is disclosed structure for the term. The Court finds that execution unit 201 is used in the specification in a manner consistent with the extrinsic dictionary definition of “control unit” and Plaintiff’s expert’s definition of a “control unit.” In other words, execution unit 201 is used in the specification consistent with a plain and ordinary meaning of the “control unit” term. No further construction to the “controlling unit” term is necessary. Because this resolves the dispute between the parties, the Court finds that no other terms within the disputed phrase requires further construction. *See U.S. Surgical Corp.*, 103 F.3d at 1568.

The Court hereby construes the term “**a controlling unit which displays an operation screen related to the operation form which is determined by the determining unit displayed**” to have its **plain and ordinary meaning**.

V. CONCLUSION

The Court adopts the above constructions set forth in this opinion for the disputed terms of the patents-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

Within thirty (30) days of the issuance of this Memorandum Opinion and Order, the parties are hereby **ORDERED**, in good faith, to meet and confer regarding another effort to mediate this case with the mediator agreed upon by the parties. As a part of such mediation, each party shall appear by counsel and by at least one corporate officer possessing sufficient authority and control to unilaterally make binding decisions for the corporation adequate to address any good faith offer or counteroffer of settlement that might arise during such mediation. Failure to do so shall be deemed by the Court as a failure to mediate in good faith and may subject that party to such sanctions as the Court deems appropriate.

So ORDERED and SIGNED this 1st day of May, 2020.



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE